the MANAGEMENT REVIEW

FEBRUARY, 1947

AMONG THE FEATURES

Executives' Working Habits

The Organization Under Changing Conditions

Sunspots and Business Activity

How to Be a Good Dictator

Keeping the Work Moving

Conducting the Salary Interview

Cost Reduction in the Plant

Automobile Expense Allowances

The Pioneers of Scientific Management

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- PERSONNEL
- PRODUCTION
- OFFICE MANAGEMENT
- MARKETING
- FINANCE
- INSURANCE
- PACKAGING
- *BOOKS OF THE MONTH*

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What New Labor Legislation Is Coming?

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How Can Management Arbitrate Effectively?

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How Should Employee Polls Be Conducted?

What's Happening in White-Collar Unionization?

What Is the Situation of Average Companies Concerning Portal-to-Portal Pay?

How Can Employee Selection Be Improved?

How Can Managerial Positions Be Evaluated?

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A CONFERENCE FOR AMA MEMBERS ONLY

Because of the overflow crowds that have marked the Mid-Winter Personnel Conferences in past years, the Association has decided to limit this meeting to members only. AMA regrets the necessity for this decision, but non-members will appreciate the justice of giving preference to members in such a situation.

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To avoid misunderstanding, the Association urges all members to check to see if their companies have a "Company Membership" or an "Individual Membership." *If your company is a member,* then you and as many of your company associates as wish to may attend. *If you have an individual membership,* the rights and privileges extend only to the person in whose name that individual membership is held.

MAKE YOUR HOTEL RESERVATIONS IMMEDIATELY!

You are strongly urged to write for your hotel reservations at once. If you are staying at The Palmer House, *be sure to mention you are an AMA member, going to the Personnel Conference.*

AMERICAN MANAGEMENT ASSOCIATION

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CONTENTS

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THE MANAGEMENT INDEX

General Management

How Much Do Executives Work?

SWITCHING the spotlight from management quizzes about impersonal problems, such as taxes, prices, and social responsibilities, *Fortune* recently polled U. S. executives on how they treat themselves as workers. The replies, summarized in this article, show a certain amount of to-hell-with-what-you-think honesty. (Three per cent of those queried give the customary hour of their arrival at the office as between 10:00 A.M. and noon.) It is possible, on the other hand, that some respondents may have indulged the honest human frailty of kidding themselves about themselves. (Forty-six per cent of the Far-West executives who admit to taking regular exercise say they take it seven days a week.) But as a whole the answers are informative.

Executives were first asked what time they usually arrived at the office. A total of 20.7 per cent stated that they are at their offices by 8:00 A.M.; another 28 per cent arrive at 8:30; 33.8 per cent reach the office at 9:00; 14.2 per cent get there at 9:30, and 3.3 per cent between 10:00 A.M. and noon.

This picture of early-morning energy is nationwide, except for the long-range commuters of Greater New York. Whereas 82.5 per cent of executives in the entire U. S. are at their desks by 9:00, in the New York area 60.7 per cent are in at that hour. The 8:30 deadline offers even greater contrast: It is met by 49 per cent in the country as a whole, 61 per cent in the Mid-West, and only 19 per cent in New York.

In the country as a whole, 30 per cent of the executives leave their offices by 5:00; in New York, 24 per cent. Between 5:00 and 5:30, 37.3 per cent more leave, and between 5:30 and 6:00 an additional 23.5 per cent quit. The remainder leave after 6:00. The term, "bankers' hours," incidentally, is still valid: Executives in financial institutions are the last to come in, the first to call it a day.

Asked how long they take for lunch on workdays, 13 per cent stated that they spent half an hour or less; 43.1 per cent take between half an hour and an hour; 39.3 per cent are out for an hour to an hour and a half; 4.3 per cent lunch for an hour and a half to two hours; 0.3 per cent admit to taking lunches two to three hours long.

The next question was, "About how often do you work at night in the office —how often at home?" While 80.5 per cent seldom work at the office at night, only 54.1 per cent replied that they seldom took work home. One or two nights are spent at the office by

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13.7 per cent, while 26.9 per cent spend as many nights doing work at home. In all cases homework scored higher than night-time office work.

Asked their wives' attitudes about their working after hours at the office and at home, 29.3 per cent stated that their wives object to after-hours work in the office, compared to 17.9 per cent reporting objections to work done at home; 60 per cent reported that their wives were sympathetic when work caused them to stay in the office after quitting time, whereas 71.4 per cent are sympathetic when additional work must be brought home.

A poll of executives' wives might explain just why more of them object to their husbands' working late in the office than to their working at home. Perhaps they are disturbed by the thought that the husbands might not actually be in the office. At any rate, the feminine attitude is doubtless one explanation of management's preference for stuffing extra work into a briefcase rather than spending a dreary evening downtown. The lure of a home-cooked meal and of comfortable house slippers is also potent.

During the winter the majority of executives (61.9 per cent throughout the nation) usually work on Saturdays; 16.1 per cent, occasionally; 22 per cent, practically never. During the summer only 45.3 per cent usually work on Saturdays. New York executives work fewer Saturdays. During the winter 40.4 per cent practically never work on Saturdays, and for the summer months this figure rises to 65.3 per cent.

Asked whether they felt they could do a better job if they had longer vacations, 65.1 per cent of the executives stated that they felt their present vacation times were about right; 32.9 per cent would like more time off. Throughout the nation, these vacation periods range as follows: none, 11.4 per cent; one week, 9.5 per cent; two weeks, 24.9 per cent; three weeks, 22 per cent; four weeks, 21.4 per cent; more than four weeks, 10 per cent; weekends only, .7 per cent.

"Not counting weekends," the next question read, "do you take any regular exercise?" Fully 41.3 per cent say that they do, and of these, 32.7 per cent say they exercise daily, 40.9 per cent, several times a week. In the Far West 46 per cent of the executives boast daily workouts.

The American secretary's reputation for being a general factotum who does everything for the boss but think for him is well debunked by further results of this survey on U. S. executives' work habits. While the majority of executives' secretaries keep track of business engagements and remind their bosses about them (75.4 per cent) and answer routine letters under the bosses' names (58.5 per cent), other functions often attributed to secretaries are not actually delegated to them. In all cases only a minority ask their secretaries to write checks for their personal bills, or do personal errands like buying shirts or theater tickets. And the picture of a female Cerberus seems equally false. When a secretary bars the door or refuses to let a phone call go through, the chances are about three to one that the decision is her boss's rather than her own.

Fortune, October, 1946, p. 5:4.

• RECENT FIGURES indicate that 15 per cent of all white-collar workers are organized. The approximate breakdowns are: (1) communications, 53 per cent; transportation, 25 per cent; utilities, 19 per cent; manufacturing, 9 per cent; and wholesale and retail trade, 8 per cent.

—F. M. KARCHES in *NOMA Forum* 12/46

Adapting the Industrial Organization to Changing Conditions

BETWEEN the remote past and the present lies the whole of the evolution of organization from its simplest, crudest beginnings to the enormously complicated and difficult stage at which it has now arrived. It is not going beyond the bounds of moderation to suggest that we are confronted with a world in ruins from which only the power of organization, constructively applied, may be expected to rescue us; moreover, that we are faced with an utterly unprecedented condition of appalling domestic strife into which the power of organization, used against the best interests of the social order, has plunged us. Drawn as we are into these two furious vortices from which, for the time being, at least, escape seems impossible, one is tempted to assert that a proper sense of proportion would characterize discussion of the *adaptation* of industrial organization to changing conditions as belonging in the category of "polishing brass on sinking ships." What we should really be more concerned about, so it seems to me, is the *survival* of organization in the face of changing conditions.

Amid the drastic and unpredictable sweep of inimical economic, social, and political currents, it is almost a gesture of futility to indicate that hardly a better interpretation of cause and effect could be given than to assert that at the roots of worldwide, as well as local, difficulties, there will be found grave violations of optimal conditions which, however long they may plague us, we should strive with all the forces at our command permanently to correct.

I use the expression "gesture of futility" because after a generation of study of the doctrine of the optimum, I must reluctantly express the conclusion that this doctrine has not as yet succeeded in making an effective appeal to leaders in private and public life, and that on the whole they are not interested in coming to grips with its implications. To put the case bluntly, they are, by and large, still content to worship at the shrine of ever-increasing size, and to place achievement of this quantitative goal far ahead of the much more significant and qualitatively worthwhile objective of goodness of results. A fundamental revision in the philosophy of many of our leaders must occur before the foundation of what I believe to be an essential, if not imperative, change may be laid.

To advert to the question of adapting the organization to changing conditions, I should like to present a series of statements in three sections.

I. ORGANIZATIONAL MISCONCEPTIONS, DRAWBACKS, AND FAULTS COMMONLY ENCOUNTERED

No sensible progress toward the institution of conditions of more effective organization can be made until after eradication of the following rather common misconceptions, drawbacks and faults:

1. The failure to recognize that organization is a continuing process calling for periodic adjustment of structure and relationships.

2. The tendency to overelaboration which often does not stop short of seeking to make provision for every possible contingency.

3. The unwillingness to accept, for the sake of teamwork, justifiable restraints upon individual propensities to run amuck in the organization.

4. The inability to perceive that there are limits beyond which organiza-

tion cannot be developed without incurring diminishing returns.

5. The curious illusion that it is possible to convey an appreciation of sound organization through the medium of a two-dimensional chart.

6. The overweening influence of associating the factor of increasing size with the assurance of an increasing rate of profit.

7. The insistence upon extremes in keeping top management apprised through a flood of reports regarding the minutiae of daily operations.

8. The apparently growing belief that a controller is an official whose function it is to exercise control instead of to fashion the instruments by which control is exercised.

9. The time-honored practice of using committee meetings as a device for sharing responsibility or even on occasion dodging it altogether.

10. The atmosphere of power politics and "jockeying for position," which often surrounds top management and, when encountered in its more virulent form, usually constitutes the deathknell of all worthwhile progress.

II. CERTAIN GUIDES TO IMPROVEMENT OF ORGANIZATION

To improve organization so that it will be able to adapt itself effectively to the impacts of change, the following are among the guides which should be employed:

1. Establish the fewest number of levels of the structure essential to sound operation.

2. Place authority as closely as possible to the point where action originates.

3. Decentralize operations whenever territorial considerations become of importance.

4. Avoid overlapping of functions, but always bring related work together under one and the same control.

5. Distinguish clearly among the several zones which comprise the organizational structure, i.e., administration, management, and operation.

6. Transform detailed information as quickly as possible into control information as it moves upward in the organizational structure.

7. Exhaust individual channels of performance before having recourse to time-consuming group action.

8. Establish sensible spans of control which will fully take account of the differing personal equations of individual executives.

9. Effect the widest possible application of the principle of separating planning from performance.

10. Always have a definite goal in mind, and on paper, in terms of which progress made in improving organizational conditions may be periodically appraised.

III. SOME TENETS OF A PHILOSOPHY OF ORGANIZATION

Nothing is nearly so important in the realm of organization as to subscribe wholeheartedly to the truth of the following tenets and always to act upon their implications:

1. To adhere to the substance of organization rather than to worship the form in which it is cast.

2. To view organization as a means to an end, rather than as an end in itself.

3. To recognize the values inherent in improvisation, rather than to rely exclusively upon the virtues attaching to organization.

4. To insure liberation of human energies rather than their suppression or regimentation.

5. To respect the authority of

knowledge rather than the authority of position.

6. To strive for the maintenance of loyalty on the part of executives to their subordinates, rather than stress the essentiality of the reverse process.

7. To develop well-rounded and intellectually balanced executives, rather than one-sided and narrow specialists.

8. To imbue executives with a spirit of tolerance toward one another, rather than permit the existence of conditions productive of intolerance.

9. To inculcate in the minds of executives the wisdom of rendering themselves dispensable, rather than of cherishing the illusion that they are indispensable.

10. To sacrifice almost any other value rather than cause injury to the foundations upon which inspiring leadership rests.

From an address by Harry Arthur Hopf before the 21st Annual Industrial Conference, Rutgers University, New Brunswick, N. J.

Grants-in-Aid Available for Management Research

THE American Academy of Arts and Sciences announces that income from its Permanent Science Fund will be disbursed as grants-in-aid in support of research projects in the fields of Scientific Business Management, Manufacture and Commerce, Engineering, Psychology, Education, Economics and Sociology, Mathematics, Physics, Chemistry, Astronomy, Geology, Geography, Zoology, Botany, Anthropology, History and Philology, Medicine, Surgery, Agriculture, or any other science of any nature or description.

Applications for grants-in-aid are receivable on multiple forms which will be supplied upon request to the chairman of the Permanent Science Fund Committee, and are considered by the Committee on March 1 and October 1.

Requests for further information about conditions governing the grants should be addressed to: John W. M. Bunker, Chairman, Permanent Science Fund Committee, Massachusetts Institute of Technology, Cambridge, Mass.

Americans on the Move

MORE than 27 million persons—one-fifth of the country's population—moved away from home during the war. Of the total, 12 million men and women were in the armed forces, war plants drew away many more millions, and the exigencies of war caused servicemen's families to migrate.

Great as this wartime migration was, it had been building up for some time prior to the war. In prewar years, people moved out of their home states at the rate of 1,300,000 a year. The war doubled this rate—but the prewar figure was sizable. And the postwar rate will continue high, according to Census experts.

This migration is the result of two basic factors—birth rates and the location of employment opportunities. For many years the rural South has been the nation's nursery, its main provider of manpower. However, its birth rate far exceeds its limited supply of jobs. For decades, better employment opportunities have been found in large Northern cities. As far back as 1899, four out of every five factory jobs were located in the North, and the proportions run about the same today.

The West, too, has been making a strong bid for industrial power in recent years. New industries—aircraft, shipbuilding, steel, and a host of lesser manufactures—are drifting to the West, pulling a stream of workers in their wake.

Among these three regions, the main migratory drift has been from south to north and from north to west. If birth rates in the South continue high, the stream of migrants will continue in the same directions, by the hundreds of thousands each year.

—*Domestic Commerce* 9/46

Sunspots and Business Activity

WHETHER or not there is sound basis for a certain parallelism between the sunspot cycle and the general business cycle is a speculative question. So many requests have been received from reputable bankers and investment houses for solar data subsequent to 1937, however, that it is evident the recent sharp rise in sunspot activity, making front-page news, has stimulated interest in an old question.

The idea that the sunspot cycle may have something in common with economic prosperity originated in 1878, when W. S. Jevons, the economist, endeavored to show evidence for a definite cycle in economic crises with an average interval of between 10 and 11 years. He determined this interval from what he regarded as "unquestionable collapses" occurring between 1721 and 1887. This he regarded as very near the average of the sunspot cycle, which he took to be 10.45 years. Since he could see no reason "why the human mind in its own spontaneous action should select a period of 10.45 years to vary in," he postulated that there must be some outside phenomena, related to the solar cycle, timing the industrial waves of prosperity and depression.

Believing that collapses formed the basis of the business cycle and that the business cycle was dependent upon crops, he tried to find a similar pattern in the fluctuation of agricultural prices and sunspots. If sunspots affected crop production and crops were dominant in economic affairs, then the chain in events connecting sunspots with business might be demonstrated.

Later Dr. Warren Persons showed that, while there was a very high correlation between agricultural yields and the physical production of crops in the United States, the corresponding correlation with total values was not a close one. Every American farmer knows how often bumper crops marketed at low prices clip the margin of earnings to such an extent that the income from unusual agricultural yields may actually be less than that from a more meager supply marketed at more favorable prices.

In 1914, Professor H. L. Moore, propounded another theory. He stated that there was an eight-year cycle in the annual rainfall in the United States which corresponded to a similar cycle in wholesale prices. Thus, to Professor Moore, weather was the key to agriculture, which, in turn, affected the ups and downs of trade in general. Dr. Persons differs from Professor Moore and insists that his own studies do not warrant the belief that the prices of agricultural commodities in themselves exhibit the periodical movements that reflect the changes in general business conditions.

Failure to find a sound basis of argument for a connection between agricultural yields and periods of prosperity and depression has led to the search for the cyclical causes. Could it be that changes taking place in the sun affect human psychology more intimately than they do agriculture and that periodic waves of pessimism and optimism are at the foundation of business behavior?

No one doubts that business cycles depend to a very large extent upon people's mental attitudes. Dr. Ellsworth Huntington of Yale is a persistent believer in the idea that changes in the sun affect not only the earth but even human health and behavior. His studies led him to believe that there is a certain dependence of mental atti-

tude upon health—that mental power is at its best about one year after maximum health. He assigns four years as the interval between a degree of maximum health and general business conditions. He bases his index of health upon the inverse death rate, a procedure which some have regarded as questionable. Nevertheless, with such a system of more or less elastic "lags," it appears possible to make adjustments between the business curve and the sunspot curve that would allow for many of the discrepancies and align them much more closely.

Assuming that some psychological explanation of business fluctuations is a plausible one, then the question becomes one of finding a relationship between cycles in business psychology and cycles of cosmic origin, if the hypothesis of sun and business is to be vindicated.

If one were to attempt to find a suitable index for mass psychology, perhaps one could do no better than to select the market price of securities, whose fluctuations appear to be easily influenced by events which affect the human emotions. Prices rise with increasing demand and fall as the demand lessens. When an investor is optimistic enough to believe that prices will be higher in the future, he buys securities because of either his anticipation of profit or his desire to gain possession of those securities as cheaply as possible. When many investors feel the same way, bids rise with a consequent upturn in the Dow-Jones averages.

If investors, in general, are pessimistic with regard to the future, their tendency is to turn the securities into cash lest, with a fall in prices, loss should be experienced. Any volume in the demand for selling invariably eases the market; and the Dow-Jones averages fall. Thus market quotations form a daily index of a cross-section of the psychology of at least one segment of society—those who participate in investments.

Utilizing the Dow-Jones average as an index of human psychology, one can compare the ups and downs of market fluctuations with the sunspot cycle over the last two decades. The similarity of the two over this interval is sufficiently striking to arrest the attention. The sunspot maxima in 1928 and in 1937 corresponds within a year to the turn of the market. The depression years of 1922 and 1932 correspond within a year to the last two minima in the sunspot curve. If the curve were carried further back in economic history, however, it would show that four out of the last five major depressions followed rather closely in the wake of sunspot *maxima.*

Unfortunately, we have no satisfactory physical picture of the mechanism which could rationally connect the ups and downs of security prices with the ups and downs of the sunspot curve. Mass psychology certainly would appear as a basis for the fluctuation in market prices; but we are at a loss for any satisfactory demonstration at the present time as to why changes in solar activity could change the psychology of large numbers of people simultaneously.

Taking one more look at the sunspot curve, we may anticipate a rise in solar activity until the early part of 1948. There is a sound basis for believing that sunspot numbers will diminish thereafter until some time in 1951.

By HARLAN T. STETSON. *Dun's Review,* October, 1946, p. 18:9.

• THE GOVERNMENT IN WASHINGTON is issuing pay checks to nearly 20 million people. No wonder taxes are high.

—*Management Information* 12/16/46

Farming Goes Big Business

THE corporation farm, which began commanding notice during the depression days of the early '30's, is a huge land-holding operation conducted along big business lines. It achieves low-cost farm production through the use of mass production machinery. In by-passing all hand and horse labor, this mechanized farming system can literally annihilate work.

The 95,000-acre Campbell Farm Corporation in Montana speaks a language of efficiency and economy that would delight the most exacting business expert. Its 52 tractors work around the clock, snatching top soil to pieces at the rate of 1,000 acres a day, with three shifts of operators. They seed 3,000 acres a day in wheat after the ground is broken. The crops are harvested with 23 combine harvesters, 80 binders, and 11 threshing machines. The farm is divided into 10,000-acre units, each of which has a headquarters with supervising sectional managers, foremen, etc.

To compete with these gargantuan operations, many of the small farmers have pooled their holdings on a cooperative basis. They have put their combined farm operations under one farm management, and each has signed a contract giving the general manager wide discretion. This chain system is incorporated and has facilities for large-scale buying and selling. The corporation owns the tractors, trucks, and all the equipment, which serve the needs of each farm in turn, and it coordinates their operations. Full-time agricultural specialists are employed to analyze the needs of each farm and give necessary advice. The proceeds of the farms are shared between owners and manager on a prearranged contract basis.

There are many variations of corporation farming. While some have shown amazing efficiency, not all have been successful. In its 1929 survey, the U. S. Department of Agriculture reported that the corporate farm system has proved neither better nor worse as an economic success than the average family system. There is probably enough good in the development to assure the big farm operator a permanent place in our agricultural economy. But there is no likelihood that the family farm will be uprooted by the superfarm.

—Ross L. Holman in *Financial World* 11/27/46

Expenditures for New Plant and Equipment in 1946

EXPENDITURES for new plant and equipment by American business, exclusive of agriculture, totalled almost 12 billion dollars in 1946. This dollar aggregate is more than a fourth larger than the previous peak of private outlays reached in 1929.

Quarterly expenditures increased progressively over the 2-year period 1945-46 with expenditures in the last quarter of 1946 at an annual rate of 14 billion dollars. Manufacturing and mining accounted for over half of total outlays in both 1945 and 1946; trade, service and other commercial firms, a third; and railroads, communications, and utilities, the remainder.

In general, estimates of expenditures planned six months in advance have corresponded closely to actual expenditures. Since the first quarter of 1946, the discrepancy has ranged between 3 and 5 per cent.

—Genevieve B. Wimsatt in *Survey of Current Business* 12/46

Subdepartments Also Use Procedure Manuals

MOST large organizations have a procedure manual for executives and staff heads, but the Monsanto Chemical Company, St. Louis, has found it just as desirable to have procedure manuals for such subdepartments as the mail, Addressograph, and Teletype units.

This not only standardizes procedure in these departments but also raises workers' efficiency. The use of procedure manuals has also helped to reduce turnover and makes it easier to promote and transfer personnel in these departments. All procedure manuals for subdepartments at Monsanto are prepared and kept up to date by the office service department.

—*American Business* 10/46

Office Management

How To Be a Good Dictator

HISTORY is replete with good and bad dictators. Greece flourished under the good ones—Rome declined under the bad. There is an equally wide gulf between good and bad dictators in the office, from those whose dictation is systemized, clear, and fluent, to those who mumble their words, gallop furiously through dictation, disregarding the ability of the stenographer to take it, and who waste their time and that of their stenographers because they do not plan their work, but function only as the spirit moves them. Sales presentations are carefully tailored in the sales department, advertising copy is pruned here and there to harvest the biggest crop of customers, factory operations are timed to save labor cost, test-runs are made to assure that materials give maximum yield—yet, dictation in the office too often is handled without plan or system.

The dictator, usually a division head or the office manager, often acting on the assumption that the boss can do no wrong, wastes a lot of time and money because he does not systemize procedure. To improve his efficiency, the dictator should evaluate his present methods by checking them against the following 12 points:

1. Assign definite hours for dictation. Calling a busy stenographer away from work whenever the urge comes to dictate a letter or two keeps output down. At times this may be necessary, but it can be minimized with careful planning.

2. All the information should be before the dictator when he dictates. Sending a messenger for the data while dictation is in progress holds up work.

3. Spell unusual words and proper names. This minimizes corrections and rewrites. Make yourself responsible for punctuation, grammar, and sentence structure.

4. If possible, dictate where you are least likely to be interrupted. If you can get away from a telephone, do so. In many offices, interruptions increase dictation time and errors. Most of these interruptions are unwarranted and can be postponed.

5. Time your word flow to the stenographer's speed. Some stenographers, particularly new ones, hesitate to ask the boss to put the brakes on his dictation and then present garbled versions of what was said, necessitating rewriting. "I thought you said this," is a common plaint in offices, and in most cases it is due to poor timing of dictation and shorthand speeds.

6. Analyze the letters you've been dictating. Are they too long? Can you cut out excess wordage used through habit? Are you employing too many trite expressions or worn-out phrases, discontinuance of which would spruce up your correspondence? Letters should be as short and concise as possible. Coverage should be thorough, but the tempo of the times demands brevity.

7. Form letters or form paragraphs should be adopted to convey similar messages, and such letters should be turned out by duplicating machine.

Often the similarity isn't apparent until the carbon copies of letters written over a prior period are carefully analyzed.

8. Write short, informal office memos in longhand. Takes less time than having a stenographer type them.

9. Eliminate trite salutations and closings, such as, "We have yours of the 14th," "Thanking you for any attention you give to this matter," etc. This counsel is not new, yet a surprising number of dictators still waste stenographic time and typewriter ribbons on unnecessary verbiage. Today the recipients of your letters want facts and are not peeved when a letter is trimmed to the bone. It saves them time, too.

10. Consider using window envelopes to save typing time.

11. If you make a rough draft of an important letter, make all changes the first time; and if the final draft requires minor corrections, make them in a way that minimizes erasures.

12. Give the stenographer explicit instructions regarding the numbers of copies wanted, enclosures, rush material, rough draft work, and the setup of the letter, if unusual.

By Fred Marsh. *The Office Economist,* No. 4, 1946, p. 7:1.

Keeping Office Work Moving Under Current Conditions

Interest in keeping work moving suggests the presence of the negative. It brings to mind a friend's description of his car. He said it had three speeds—"slow, damn slow, and stop." In discussing this subject, it must be assumed that the office work is moving in some fashion at least. That brings up point No. 1—morale.

It is the supervisor who has the strongest influence upon attitudes in the office—important factors in determining the work flow. If he is progressive enough to look for better methods and interest his group in applying them, the work will move more rapidly. Thus the first element in keeping work moving is good supervision.

Even when morale is high, however, two other factors may cause low output: (a) lack of knowledge on the part of those concerned of how much work should be done in a day, (b) arrival of work behind schedule. These factors are so thoroughly mixed that it takes measurement to separate them. Measurement then is the second element important in keeping work moving.

Time studies offer the best approach because, if properly taken, they bring all observations to a uniform normal. A normal measurement of a fair day's work is necessary to the setting up of uniform quotas of any kind. Over-all times or past performance records will not be fair because they include too many errors; for instance, all of the delays would be buried in such records of output.

Time studies would develop three types of factual information necessary to the proper analysis of the working conditions: (1) They would supply the elements of essential work done. If the observations were correctly rated in terms of normal performance with relaxation percentages added, the results would be standard operation times. (2) They would reveal current amount of delay time. (3) They would indicate wasted work—which may be

eliminated if the costs of doing so do not exceed the savings.

With operation standards and work quantities, we can establish the total workload to be carried. Then if we know the rate of performance or efficiency, we can ascertain the time required to complete the volume of output, exclusive of delays. In this phase, incentives can play a vital part. They can help substantially in (a) raising the rate of productivity, (b) uncovering the delays, and (c) most important to planning, stabilizing the rate of output. This latter factor is the one that so often accounts for the failure of a plan.

Incentives greatly reduce the variations in performance and thus improve the reliability of planning. Since many offices do not have incentives such as are used in manufacturing, quotas that are looser or efficiency factors that are low must be employed in making up work schedules. Naturally, the relative accuracy will be less if for no other reason than that the people involved have no direct financial interest in maintaining the schedule.

Nevertheless, quota measurements should be used to their fullest advantage. The performance efficiencies should be computed by individuals wherever possible and displayed for the employees to see. This will do two things: (1) It will show which people are meeting the quotas. As an important by-product of this feature, it will help in bringing about the stabilized productivity so necessary to sound planning. (2) It will foster the reporting of delay times as a means of improving the individuals' performance records.

With some method of work measurement and with performance records, we can plan production. To counter the objections of those who argue that the planning of office production is impractical, it is necessary to emphasize here certain factors that make office production planning easier than factory production planning. The number of variables in the office is less than in the factory because more office operations have a fixed load. Certain operations must be done daily, weekly, or monthly. These regular operations simplify work planning. They permit more definite assignments and a relatively constant plan of production.

Uniformity in workload is induced also by the negligible effect of volume on many office operations. For example, the writing of an invoice takes practically the same time whether it is for 10 or 100 pieces. This change in quantity in the shop, however, means nearly 10 times as many man-hours. The relative constancy exists in many office operations and is important to recognize.

Now with constancy of major proportions, at least in some offices, the workload can be laid out according to what might be called a master plan. Irregularities and odd jobs can be assigned to a small auxiliary group of employees, specially designated to provide the cushion for surges and breakdowns in the regular schedule. Segregation of the irregularities has another advantage. It removes the relatively few problems upon which supervisors base their claim that planning of incentives can't be applied to their operations.

Schedule operation may reveal faulty flow caused by production dams of major proportions. To illustrate: The president of one firm kept in touch with the current volume of business by having all incoming orders turned over to him. If he became involved in some urgent problem, the orders stayed in his office while all those assigned to handling them puttered around. No

attempt was made to remove this obstacle to production until measurement and planning were introduced. Even when this major delay showed up; the office manager was hesitant to take away one of the president's prerogatives. The president, however, readily admitted that operation of the plant continued in his absence and agreed that he could keep in touch with business just as well by having carbon copies of incoming orders sent him a few hours later. Through this change, the initiating operation of the entire business could be started each morning without delay.

In many offices, this same type of bottleneck obstructs procedures related to correspondence. Delays in starting dictation hold up transcription. Neglect in signing letters puts a heavy load in the mailing section.

Our interest in keeping the work moving is of little significance unless we can help to turn out more volume with the same capital investment. Undoubtedly, we can make some constructive analysis of the office work cycle which will improve turnover. That did happen in an industrial office the other day, where a change in sequence of operations reduced the cycle three days. That means the customer gets his shipment three days sooner, and the plant has its money tied up for three days less time.

The usual office is an overhead cost that has to pull its own weight by rendering commensurate service. It can do this by keeping the work moving in such a way that the business cycle will be reduced. This requires designing the office cycle to bring about the shortest practical time for the essential artery flow. The total work done may be the same as before. However, the procedures that are vital to business turnover should be set apart from the other work and put on the main track.

Keeping the work moving requires an adequate supply of manpower. Keeping the work moving efficiently requires good supervision, work measurement, and planning. But we should not stop here. We should remember the office is a service department. As such, it must make the effort to "earn its keep." In so doing, the office can render real service by removing bottlenecks in business operations. Then it should go a step further and arrange the necessary office procedures so that they will take a minimum amount of time in the business cycle. Thus we can help pay our way through improved turnover and perhaps speed up the deliveries to customers against the time when that may be the most important element in competition.

From an address by Phil Carroll, Jr., before the National Office Management Association, New York.

"Errorless" Typewriter

A "VISIBLE LINE" typewriter which prints an entire line at once, allowing the operator to correct mistakes in the setup before printing, has been engineered and patented by a New York manufacturer. The new machine has a standard keyboard, and its operation is almost identical to that of typewriters now in use.

Electrically driven, it assures even pressure on all keys, allows justification of lines and centering without the necessity of typing a rough copy first, and eliminates depreciation due to eraser dust.

The new machine provides for the simple change of type faces and type sizes ranging from 6-point to 18-point. A special device warns of the space remaining at the bottom of the page, assuring even bottom margins.

—*The Journal of Commerce* 12/20/46

About Tickler Files

ARRANGED according to dates at which the contents are to receive attention, tickler files may be known by other names—such as suspense files, follow-up files, reminder files—and may be classified in various ways. The following are at least three ways in which they may be classified:

1. *According to the period or dates covered.* These files are of two main types—those provided for definite dates and those required for indefinite dates. The first type may be further subdivided as to kind according to the intervals between dates. In other words, provision may be made for the most usual type of tickler—the daily one, or for weekly, monthly, or annual ticklers.

A daily interval is usually employed for such files as the general correspondence tickler, the incoming shipment advice tickler; a weekly interval for a machine check-up or maintenance schedule; a monthly interval for the vacation schedule, which is often arranged in advance on a monthly basis and consulted at the first of each month so that appropriate action may be taken as to rearrangement of work or temporary replacements; an annual basis for consideration of such matters as salary adjustments, insurance coverage; even longer time intervals for such items as anniversary celebrations, special advertising.

In many cases, tickler needs, regardless of time interval, can be handled by one file. Daily, weekly, monthly, and annual intervals can easily be covered by one set of guide cards. The appointment calendar can be used for hourly or lesser intervals. In some cases, however, use of special tickler files or devices will be more convenient than use of the regular tickler. Care must be taken to see that the convenience of the special file or device is not outweighed by the danger of its being overlooked.

Ticklers of the indefinite date variety almost invariably arise from a need for a reminder contingent upon the turn of some action related to the tickled subject. Marking the tickler so that it will receive attention periodically until either the contingent event occurs or its likelihood disappears—say the 15th of each month or the first of each week—is about the only satisfactory method for handling this material. This expedient raises the problem of the choice of a time interval. If the time interval is too long, the tickler may not serve as a reminder at the time it is needed. If there is doubt as to the length of the interval, the shorter period is the preferable choice. Though this may involve some waste motion and lost time, the loss will usually be negligible considering the importance of the action indicated by the tickler.

2. *According to the persons or offices for whom maintained.* Where filing is centralized, one of three different practices is commonly followed. The ticklers may be kept: (a) by the filing department, in separate files for each department; (b) by the filing department, all in the same file but separated under each date according to departments; (c) by each department as a decentralized aspect of the central filing system. Other separate ticklers may be maintained throughout the organization—usually for top executives, for or by lower executives, and by various other workers.

3. *According to physical characteristics.* Materials to be followed up may range in size from a file of materials several inches thick to a small

slip of paper with a scribbled idea, or even a small space on a desk calendar or work schedule. The following are some of the most common types of material that need to be followed up:

> Desk calendars and memorandum pads; pocket diaries; letters received and copies of letters written; forms received and copies of forms issued; contracts entered into; case files received and case files built up.

The practice of filing material to be followed up in its regular place and cross referencing it in the tickler is preferable to that of filing the material itself in the tickler. If the material is filed in the tickler, the alternative practice should be to place a cross-reference in the regular file indicating that it is in the tickler file under a certain date. When the material is filed in its regular place, if a duplicate of it is not available for filing in the tickler, a memorandum slip or card with only minimum cross-reference information may be used.

Should a record be made on the material in the regular files to indicate that a tickler has been set up? If the material is of a type for which ticklers are made in all or most cases, such a record should not be necessary. The volume of work involved in making records on the original follow-ups will be larger than the effort entailed in searching the tickler in isolated instances. Such a record will be of value only if the material is of a type for which ticklers are rarely made, or if for some other reason the volume of work involved in making the record is small.

There remains a final problem to be discussed. What kind of filing equipment should be used for tickler files? Usually two types will be found desirable:

1. A desk box file for cards or slips.
2. A regular vertical file drawer or cabinet for letters and other materials too large for desk files.

Other types of equipment, of course, may be desirable for forms of special sizes if the volume warrants. If, on the other hand, the volume of ticklers of all types is very small, only one tickler may be required. For example, copies of letters and other materials of similar size may be folded and placed in a desk box file along with slips or cards. Consideration of volume and of convenience in physical handling will govern the choices to be made.

By George W. Peak. *Office Management and Equipment,* November, 1946, p. 47:6.

Record Retention and Disposal Policies: A Survey

To determine current practices regarding length of record retention, the degree of protection afforded office records, and methods of ultimate disposal, NOMA recently conducted a survey among 208 representative companies. These companies reported that the 99 types of records studied in the survey were handled on an average of 10 different ways each—a total of 989 ways for all records. The range was from one to 16 different handling methods for individual records.

The 99 types of records reported on were grouped into five major categories:

1.	general and financial	40 types
2.	treasury	13 "
3.	expenditures	18 "
4.	purchase and stores	19 "
5.	sales	9 "

Use of office floor area for record storage space was reported by 188 companies as follows:

a. 1 company—30 per cent of office floor area
b. 4 companies—20 per cent or more
c. 17 companies (9 per cent)—more than 10 per cent
d. 54 companies (29 per cent)—more than 8 per cent
e. 85 companies (45 per cent)—more than 5 per cent
f. 132 companies (70 per cent)—more than 3 per cent
g. 15 companies (8 per cent)—less than 1 per cent

Centralized record storage space for the entire office is maintained by 72 per cent of all companies reporting. Two-thirds of these companies provide for destruction of useless records by individual departments rather than routing to storage vaults for destruction.

Handling of general and financial records was the most standardized type reported. Fully 60 per cent of all companies reported permanent maintenance of 17 of the 40 in this category. Least uniformity was reported for purchases and stores records and for sales records.

Fireproof or fire resistive metal vaults or containers are widely used for storage of certain types of records. A majority, 60 per cent of the companies, favored fireproof type of protection; non-fire-resistive containers were reported in use by 88 companies.

Burning of records is the most popular method of destruction, with 121 companies disposing of at least a part of their records in this manner. Sale of records as waste paper was reported by 94 companies. Only 8 companies resort to shredding. Forty companies use parts of old records as scratch paper.

Duplicate copies of branch office records are maintained at the central office by 53 companies. Eighteen companies keep duplicate copies five years or more before destroying them—even though originals are also retained. Sixteen companies reported that duplicates are kept "as long as necessary." Only six companies destroy the duplicates after one year.

Of 195 companies, 120 (almost two-thirds) prescribed definite retention periods for *all* records. Only two companies had no definite retention schedules for at least certain types of records.

For legal purposes 150 companies (75 per cent) keep records beyond the statute of limitations time requirement. Yet 38 of 202 companies reported they had not familiarized themselves with the provisions of the statute of limitations with regard to certain office records, and applicable within their states or provinces.

Only 56 companies (27 per cent) mark or label records with a definite destruction date. Of this number, 36 name the individual responsible for marking. In 13 instances the office manager is designated; others named are file supervisors, department managers, accounting department supervisors, storage clerks, vault supervisors and "designated employees."

Of 35 companies indicating where on the record the destruction date was placed, 31 companies favored "marked containers." One each favored a perpetual inventory form, a file folder, and an "archive transmittal form."

In 115 instances microfilming was favored by companies for certain types of records (one type of record microfilmed by one company being one "instance").

NOMA Forum, December, 1946, p. 18:8.

Survey of Personnel Testing Practices

IN a field check on the use of personnel tests in industry made by the California Council of Personnel Management, interesting data was obtained from 100 organizations, 45 per cent of which have personnel testing programs. These 45 organizations represent: manufacturing; wholesale and retail trade; finance and insurance; transportation, communication, and public utilities; and government. Since no attempt was made to secure a random sample, generalizations from the data must be confined to the companies surveyed.

Personnel tests are more widely used in the clerical field than in any other, with 80 per cent of the organizations using them in this classification. Mechanical and sales come next in importance with 54 per cent each; supervisory, 49 per cent; professional, 27 per cent; transportation and executive, 25 per cent each. Sixty-two per cent of the companies use tests when filling open jobs with present employees; 56 per cent in selecting trainees or apprentices; 45 per cent in making promotions or upgrading; and 40 per cent when filling supervisory positions from the work force. Other uses reported include the selection of process operators, laboratory technicians, station operators, and non-mechanical factory workers. Two firms use testing in vocational guidance.

Sixty-five per cent of the companies report a better batting average in predicting future success when personnel tests are installed. Forty-nine per cent report more productive employees; 20 per cent, reduced labor turnover; 20 per cent (plus 7 per cent possibly), less labor trouble; 16 per cent, a lower accident rate; while 40 per cent respond that they have had insufficient experience to report conclusively in all these categories. Three companies wrote in "reduced training time," indicating that, had this item been included, a significant number of firms might have reported.

The majority of the organizations surveyed installed (89 per cent), administered (94 per cent), scored and interpreted (82 per cent) their own testing programs. A few firms have their programs installed, administered, and scored by an outside agency. A few more combine the two, the program in the main being self-developed, but making use of an outside service where advisable. Questionnaire answers were not definite enough in some cases to delineate clearly; therefore no percentages are given. Standard tests are used by 71 per cent of the companies, while 53 per cent use self-developed tests—a combination of the two being common among the more well-established programs developed by industrial psychologists. Seven per cent of the organizations utilize an outside agency testing service either entirely or in conjunction with their own program.

Fifty-three different standard tests were mentioned as being in actual use among the 45 companies. In addition were the many self-developed tests and tests developed in cooperation with specific companies or industries by industry associations, the United States Employment Service, and the United States Civil Service Commission.

In the area of intelligence testing, the

Otis S-A Test of Mental Ability, the Wonderlic Personnel Test, and the California Test of Mental Maturity seem to be in general use. In the clerical field, the Minnesota Vocational Test for Clerical Workers predominates. In the mechanical field, the Revised Minnesota Paper Form Board Test, the MacQuarrie Test for Mechanical Ability, and Bennett's test of Mechanical Comprehension, Form AA, lead. The Humm-Wadsworth Temperament Scale, the Minnesota Multiphasic Personality Inventory, and the Bernreuter Personality Inventory are reported in greatest use in the area of personality and temperament testing. Of the vocational interest inventories, the Kuder Preference Record and the Strong Vocational Interest Blank predominate.

Among the standard tests, paper-and-pencil group tests are used much more than individual performance tests.

From *Personnel Testing,* by Forrest V. Routt, Jr. (California Council of Personnel Management, 870 Market Street, San Francisco 2, Calif., 1946. 26 pages. $1.00.)

A Plan for Executive Rating

AT Butler Brothers, Chicago, a comprehensive executive rating plan is proving to be an important factor in the development of management personnel.

Each key employee is rated on six weighted factors, and usually by three different people. A merchandise department manager in a branch would be rated by the branch merchandise manager, the branch manager, and by the general merchandise manager at headquarters.

To overcome the difficulties of getting the people who make executive ratings to think in similar terms in making their appraisals (the plan involves a numerical rating on the basis of 100 possible points), the personnel division has done much educational work on the technique of rating.

Here are the six qualifications to be rated and the guides by which point values are assigned:

1. *Performance* (40 points). Efficiency with which position has been filled. Contributions in the way of suggestions, ideas, or methods. Conspicuous service or accomplishments during the year should receive major consideration.
2. *Personal Characteristics* (10 points). Appearance, tactfulness, self-confidence, and respect of associates. Consider particularly initiative, perseverance, integrity, and loyalty.
3. *Cooperation* (10 points). Ability to work successfully with others. Primary consideration should be given to individual's ability to adapt himself to the demands of the organization.
4. *General Intelligence and Specialized Knowledge* (10 points). All-round intelligence and breadth of vision. Knowledge of own position and aims of the company. Ability to grasp and develop improved methods.
5. *Executive Ability* (10 points). Ability to plan, organize, delegate, supervise, lead, meet emergencies calmly and skillfully; willingness and ability to assume responsibility.
6. *Future Value to the Company* (20 points). Consider difficulty of replacing him satisfactorily. Based on above qualifications, except performance, consider probable future usefulness to the company, giving weight to age and present position.

—*Industrial Relations* 11/46

• PROSPECTIVE CHANGES in the labor force during the current decade vary widely by region, ranging from a 25-45 per cent increase on the Pacific Coast to a 1-5 per cent decrease in the West North Central States.

—*Monthly Labor Review* 12/46

Conducting the Salary Interview

INTERVIEWS concerning salary, which come up again and again, can best be handled when they are planned in advance of workers' requests for raises. For this reason, as well as many others, employers should arrange to talk salary to every important employee at least once every six months.

One of the best ways to sabotage an employee's morale, of course, is never to discuss salary. He either becomes discouraged and quits, or keeps bringing the subject up, becoming more and more frustrated and inefficient. Obviously, not everyone can be granted a raise whenever he asks for one—and the people who are most persistent in asking do not necessarily merit the increases. It is unfortunate but true that many salary increases are given merely to mollify those who clamor for them. Persistent and unwarranted demands should be scotched by a good interview technique.

There are endless means of getting rid of the person who asks for an increase which cannot be granted. Consider, for example, the "stalling technique" whereby the employer acts receptive at first, then seizes the earliest opportunity to divert the worker from the subject, until pretty soon he finds himself out in the hall, but without what he wanted. The boss may congratulate himself for having solved the problem so easily—but did he? The employee who was denied even the courtesy of a direct answer is certain to resent having been put off, however adroitly. Remember that this man must face his wife, who is not likely to appreciate the sleight-of-hand he was given. All this means that he will probably be discontented on the job, that he will do no more than is expected, and will in effect be on a sort of sit-down strike for a time until he cools off, gets another job, or can pull a "squeeze play" to match management's technique and get what he wants. If his work falls off and he is reprimanded for that, he becomes all the more convinced that he'll never get the raise, and so his morale continues to spiral downward. This sort of treatment is not limited to run-of-the-mill or below-average workers; too often it is used on potentially valuable employees as well.

The most effective way to meet a salary request, whether it is to be granted or not, is to conduct a proper interview. The goal should be to send the individual out of your office, realistically facing his situation, satisfied that he has had a square deal, that his problem has been given fair consideration, and that there is something in the future to look forward to. This can be done even if he is not granted the increase.

In a properly conducted salary interview management should find out why the worker wants the raise, why he feels entitled to it, what problems he has that a raise, in his mind, will solve, and so on. In the course of discussion, he will talk about other aspects of his plans in the organization, his future, his home, and his activities outside the business. As the interview proceeds he should be encouraged to weigh the alternatives of an immediate raise against the possibilities of promotion in the long run. The degree of long-range planning on the part of the employee is an excellent gauge of his value, and a good salary interview will bring this out.

Whether or not a worker deserves a raise, and whether or not he receives it, he should walk away from the salary interview satisfied that he has had a hearing, that his complaints have been listened to, that the reasons he thought were adequate for the raise were carefully considered, even if they proved inadequate. Instead of regarding such interviews as a necessary evil, the employer should approach them with an element of expectation. He might ask himself, "How well can I handle this difficult situation in which I'm going to frustrate this individual? He isn't going to get what he wants. Yet I must make him walk away with a substitute that is equivalent or even better than just giving him a little raise. Perhaps I need to show him that he ought to prepare himself for life more realistically, more in terms of his own eventual good and that of the organization with which he is identified."

It should not be forgotten that, even if they cannot express it, most people are working for something more than mere money. If you think that dollars and cents are all that your interview must be concerned with, you are missing much in your understanding of human motivations. You cannot come to grips with the real issues simply by talking money. What the employee is searching for is what he feels money can do for him—the love he can get with it, and the respect and prestige it will bring. The more basic needs of security, opportunity, and long-range gains can be woven into an interview without giving the employee a long lecture about how long it took you to get where you are, about the folly of living beyond one's means, etc.

The returning veteran should receive special consideration in this regard. With his recent experiences still fresh, and his knowledge that life can be lost in a few seconds, he may be a little impatient with people who talk about long-range values, and may be more intensely interested in the immediate rewards and opportunities which, in some respects, are due him. In his case, particularly, we should avoid the use of stalling techniques or other evasive methods. Sound management demands that salary interviews provide definite, concrete answers and motivate men to function as responsible members of the team.

By LEONARD E. HIMLER, M.D., *Bulletin 16,* Bureau of Industrial Relations, University of Michigan.

Current Industrial Seniority Practices: A Survey

EMPLOYEES regard seniority as a major element in job security, and there is impressive evidence that security is frequently a stronger motivation for employees than either wages or working conditions. In the worker's mind, seniority is an impersonal standard which minimizes possible employer discrimination and favoritism in matters affecting the worker's job. For this reason, employers' policies regarding the seniority principle represent one of the cornerstones of sound management-labor relations.

To obtain a picture of current industry practices, the National Association of Manufacturers recently conducted a survey of seniority provisions in the

collective bargaining agreements of 204 companies in 15 major industries (iron and steel, iron and steel fabrication, automobiles and aircraft, electric, oil, rubber, chemicals, paper, textiles, food, leather, lumber and furniture, ceramics and glass, building and supplies and a miscellaneous group of manufacturers). In each industry five labor agreements with CIO unions, five with AFL unions and, where possible, five with independent unions were studied. The clauses were analyzed under the following five major headings:

A. Qualifications as to length of service.
B. Purposes for which seniority is used.
C. Provisions for the accrual and retention of length of service credits for time not worked.
D. Provision for loss of seniority rights.
E. Special provisions.

It should be noted that, while the survey clearly indicates the variety of seniority clauses which are to be found, it does not offer any basis for conclusions as to the advisability or wisdom of certain types of provisions, since the relative popularity of a provision is not necessarily a measure of its soundness.

Qualifications as to Length of Service. Industry recognition of the need for supplementing length of service by other factors is clearly indicated by the fact that, of the 204 agreements studied, only 47 (23 per cent) provide for "straight" seniority—i.e., seniority based on length of service alone. "Ability" modifies length of service in every other agreement, and, in almost 25 per cent of the agreements, ability and length of service are further qualified by such factors as physical fitness, training, attendance record, etc.

Purposes for Which Seniority Is Used. The survey indicates that seniority is used most commonly (in 87.7 per cent of contracts studied) to determine order of layoff and rehire. The next most frequent application is to determine promotion, demotion, and transfers within the appropriate bargaining unit. With few exceptions, every agreement provides that seniority is to be used for more than one purpose. Other uses include determination of shift selections, selection of vacations, and eligibility for overtime.

Accrual and Retention of Seniority Credits for Time Not Worked. Many and varied provisions were found for protecting the seniority of employees who are absent from the job for legitimate cause. Because many companies have several provisions covering retention of seniority rights, the number of provisions cited here is in excess of the number of contracts examined. For disability incurred on the job 58 of the contracts provide that seniority credits shall accumulate during absence. Where satisfactory evidence of illness is presented, 54 contracts provide that seniority credit shall be given. Twenty contracts specify no time limit beyond which seniority credits during absence for illness do not accrue, while 52 specify time limits ranging from less than 1 week to less than 2 years.

The following are the policies established in contracts for seniority during authorized leaves of absence: In 41 of the contracts seniority accrues with no time limit; in 47, credits accumulate over leave periods of from one to six months; in 36, credits accumulate over leave periods varying from one to three years; in 10 agreements seniority rights are retained but do not accumulate during absence; in 70, time spent on union committee work is credited.

If a worker is transferred to a new department seniority credits in the old department are retained, and seniority commences in the new department after two to six months under 21 contracts, and after one to two years under six contracts.

Eleven agreements specify no length of time during which seniority credits accrue after layoff; 107, or more than half, provide seniority credits for limited periods varying up to two years; in five contracts seniority credits are retained, but do not accumulate, during layoff.

Where workers spend time in supervisory positions, 26 contracts provide that seniority continues if the employee was formerly in the bargaining unit; 8 contracts state that seniority credits shall be retained but cease accumulating upon promotion to the supervisory job.

Provisions for Loss of Seniority. An explicit provision covering the loss of seniority rights is an important component of a seniority policy. The survey results show that industry has adopted a variety of provisions relating to this contingency. Many of the agreements studied specified several reasons for loss of seniority.

Quitting and discharge terminate seniority under three-quarters of the contracts examined. Seven contracts provide for loss of seniority in cases of company suspension, and 15 in cases of suspension on the part of the union. Seniority is relinquished under 16 contracts when employees are transferred at their own request; in 51, when they violate condition of authorized leave; in 71, when they are absent without explanation within a specified period; in 10, when they refuse to accept previous or comparable job after layoff; and in 134, when they fail to report on notification of work after layoff—with varying limits up to 15 days.

Special Provisions. Superseniority for union officials in the plant or company was the most prevalent type of special provision, appearing in 52 of the contracts examined. Counterbalancing these provisions which assure the job security of union officials, management sometimes excludes certain highly skilled or specially trained employees from the operation of the seniority system to safeguard the retention of its basic workforce. Such provisions were found in 21 of the contracts studied. Under 22 agreements, disabled veterans with ability to work are given preference, regardless of length of service; and under 30 of the contracts, employees incapacitated while at work may be employed at any other work which they can perform, regardless of seniority.

From *Seniority: Management Memo No. 1,* National Association of Manufacturers.

"Working Conditions" in Job Evaluation

THE job evaluation engineer and the heating, ventilating, and air conditioning engineer meet at the most sensitive spot in the entire production area—the worker's bench, where the former must appraise working conditions and the latter is interested in controlling them.

In his search for methods of reducing the annoyance factors in the workman's environment, the heating, ventilating, and air conditioning engineer has developed a series of objective standards that are at the disposal of the job evaluator if he wishes to use them. The fact that few job evaluation engineers have used them is largely traceable to the fact that objective criteria have not been established by this profession for the use of its technicians. However, there are objective data upon which the opinions of job evaluators can be based, and, while these are per-

haps in need of further refinement, a beginning may be made through closer coordination between job evaluation, and heating, ventilating and air conditioning, engineers, and by reference to available data.

In establishing the levels of disagreeableness of noise, the work of the acoustics engineer is available and his publications indicate that two units of measurement may be employed—the decibel and the frequency. The need for establishing the decibel and frequency levels of each of the kinds of machines used in production merits special consideration because workers may report that they have become adjusted to noisy workplaces even while hearing injury, of which they are unaware, is on the increase.

In establishing the levels of heat and humidity, reference should be made to the extremely valuable work of the American Society of Heating and Ventilating Engineers, which has devoted much study to the problem of making the workman's environment more comfortable. The Society has established objective measures of temperature levels at which workers can perform comfortably and efficiently.

For the measurement of levels of discomfort from fumes and dust, the industrial hygienists and safety engineers have developed data on the "concentration in terms of the number of parts of the element to the million parts of air."

Use of objective atmospheric measures in industry will undoubtedly lead to more exact evaluations of the physical demands of the job, and its potential hazards. In terms of efficiency and production this is a strong argument for coordinating the efforts of those who *control* the elements of working conditions with those who would *appraise* them.

—Ralph Martin McGrath in *Heating, Piping & Air Conditioning* 7/46

Will Your Company Be Represented in "The Personnel Workshop"?

AMA is seeking the cooperation of personnel directors and industrial relations executives in inaugurating a new feature at the Mid-Winter Personnel Conference (February 24-26, The Palmer House, Chicago). This feature, "The Personnel Workshop," will consist of a comprehensive exhibit of employee and supervisory publications of various kinds, plus personnel forms and records of all types, contributed by cooperating organizations.

It would be greatly appreciated if readers would submit samples of any of the following items used in their companies: (1) employee magazines; (2) annual reports to employees; (3) employee manuals or handbooks; (4) supervisory manuals; (5) supervisors' and executives' bulletins and magazines; (6) special employee publications—such as booklets on company benefit plans, job evaluation plans, incentive programs, suggestion systems; rosters of employees returning from military service; etc.; (7) personnel forms—complete series; (8) job evaluation plans and manuals; (9) merit or performance rating forms —rank-and-file, supervisory, executive; (10) bulletins, posters, and manuals on economics and company finances. In the case of personnel forms, a complete set should be submitted in a single folder (merit rating forms, however, should be kept separate).

Unless contributors specifically request their return, the publications and forms will be filed in the Association's library, where they will be put to practical research use.

Publications and forms should reach the Association's headquarters by February 17 at the latest and should be addressed to: Editor, American Management Association, 330 West 42nd Street, New York 18, N. Y. After that date, exhibit material may be sent to American Management Association Personnel Conference, The Palmer House, Chicago, Ill.

Who's Got Momma's Ear?

MANAGEMENT's failure fully to appreciate and utilize the tremendous influence the wives of their employees exert upon all industrial relationships can doubtless be ascribed largely to the lessening of personal contact in employer-employee relationships—mistakenly considered the unavoidable price of company growth and bigness. Leaders of organized labor, on the other hand, have taken cognizance of this obscure but powerful influence of the woman in the family and have enlisted her aid whenever possible, not only in securing the membership of her husband in the union but thereafter in insuring his loyalty to the union and all its activities.

It is certainly time that greater effort be directed toward informing workers' wives about the organizations which furnish them and their families with the means not simply to a livelihood but also to worthwhile living and achievement. Such effort on the part of industry will stress information, recognition, and participation through such media as:

1. *The plant paper*—for telling the employees' wives and families about the company's useful activities—past, present and prospective. Also, for gaining appreciation of the important part played by each individual within the organization.
2. *Reports and letters*—about the company's financial and operating status and prospects—issued fairly frequently rather than annually or at times of crisis—in language calculated to interpret and explain to all the family. One firm, famous for its morale, is also famous for meetings where, before everybody and his family eat and dance together, the annual report is explained in detail.
3. *"Plant open house"*—for showing just what Dad does and what his individual contribution is. Also for meeting his buddies, his foremen, and his company's officers—and *their* wives. (Instead of temporarily lessening output as expected, these affairs usually increase it!)
4. *"Inspection parties"*—for giving the new models or new products the once-over. Also for giving Dad a chance to show just which part or operation he is responsible for.
5. *Showings of work photos and movies*—"The only trouble with our exhibition of photographs showing our people at their machines was that they were so fingered that they frequently had to be renewed!"
6. *Company celebrations*—of the hundredth or millionth unit produced—with demonstrations of its final use. Too few mechanics have ever seen the final assembly and functioning of parts they've been making for years!
7. *Company picnics*—not too elaborate or costly but aimed primarily to give opportunity for officers and other employees and their families to know each other.
8. *Official recognition*—of festivals or anniversaries celebrated by important employee groups of foreign birth or extraction—if only by the wearing of the appropriate emblem.
9. *Encouragement of employee-family groups*—for Red Cross and, especially in small towns, various other activities, including classes in cooking and nutrition.
10. *Friendly, helpful contact*—or at least the expression of sincere concern, during such family crisis and "big moments" as come with accident, sickness, death, birth, marriage, and above all, with days or weeks of joblessness.

—WHITING WILLIAMS in *Nation's Business* 6/46

Veterans Return to the Nation's Factories

MORE than twice as many veterans were employed in manufacturing industries in July, 1946, as in December, 1945. About half of all veterans on factory payrolls were employed in eight major industrial groups, in which earnings averaged $45 or better over the entire eight-month period. Veterans comprised a greater proportion of the hires in the durable than in the non-durable component of manufacturing. Total separation rates for veterans, including quits, discharges, and layoffs, were consistently higher than for non-veterans. Since quits represent at least three-fourths of veteran separations and higher quit rates are characteristic of new employees, the higher veteran separation rates should not be overemphasized.

—*Monthly Labor Review* 12/46

Production Management

Cost Reduction Through Better Utilization of Tools and Equipment

THE task of increasing productivity through better utilization of tools and facilities must be undertaken on a broad plant-wide basis if substantial gains are to be made. Since proper definition and administration of the responsibilities of each major plant division bring about the highest possible productivity, the task of increasing productivity should be aimed at welding together the major divisions into a well-coordinated unit. Following is an enumeration of the major plant divisions and their functions:

Engineering. As the initial division affecting all plant functions, engineering must have a designing and drawing policy established upon practical and well-defined standards. The detailed knowledge the members of this division have of the product should be clearly and fully conveyed through the medium of shop drawings. Such items as surface finish, alignment, parallelism, accuracy, fits, and concentricity should all be standardized and these standards intelligently applied on each shop drawing with no detail left undefined. Dimensions should be so established as to guide the methods and shop divisions to produce each part as required.

The engineering division should have a general familiarity with the various processing methods such as planing, milling, turning, grinding, especially those characteristic to their particular shop, so that they can judge designs in the light of easy and economical manufacture.

Methods and Standards. This division has a twofold function: (a) to devise and develop means by which the manufacturing division can meet engineering requirements effectively; (b) to determine and set up fair time ratings on all manufacturing operations to assure the control of manufacturing costs.

If properly established, this division can become a coordinating unit blending together activities of all other plant divisions affecting the shop. For example, if the design developed by the engineering division is impractical and costly from the standpoint of manufacture, methods and standards should vigorously advocate changes. If the information on shop drawings is vague or undefined, they should demand corrections. Through their close association with the shop, and through observation of shop performance against their methods and time ratings, this division is in a position to uncover the causes of most inefficiencies.

The following steps should be taken to insure that the methods division will have adequate tools with which to work: (1) A survey of the plant should be made and the characteristics, capacity, and use of each piece of machine equipment catalogued. (2) A set of time standards for each machine center should be developed and organized for ease in rating jobs. (3) Speeds and feeds for all materials used in the shop should be established for each machine center and made available to the shop as well as for use in the methods division in rating jobs.

Tool Design and Control. This division, having functions closely allied to methods and standards, must be closely coordinated with the methods division, by which it should be guided in forming a pattern of activity that will serve the needs of the shop and, at the same time, keep tool costs to a minimum. Before any special tool is built, it should be determined whether it is necessary. Will it reduce manufacturing cost? Or will it achieve better quality? Is manufacture not possible without a special tool? If it is found to be necessary, then its manufacture should be so planned that the tool will pay for itself.

Each tool should be carefully catalogued by the tool design division. To achieve a reduction in tool costs, this catalogue might be used to facilitate the borrowing of tools from job to job wherever possible and thus to insure their plant-wide use.

Control of commercial or perishable tools and accessory or utility tools, such as drills, reamers, lathe tools, and chucks, should be assigned to a shop representative, operating under the guidance of the methods engineer. He should have the responsibility of testing—under shop conditions, selecting, and standardizing this type of tool. Integrated with this function should be the responsibility of maintaining and distributing these tools to the shop as they are needed.

Production Control. This division should be able to meet the demands of the sales division within the predetermined expectancy of management based on workload ahead and machine capacity in the shop. The emphasis should be on a well-constructed system of machine load balance, which, in accordance with generally accepted practices, is an order entry and follow-up system that allows the shop to devote the maximum amount of time to the job of making quality parts at a reasonable cost.

Without breaking into setups or otherwise disrupting the predetermined production schedule, the production order dispatchers, or expeditors, of this division should schedule and dispatch shop orders through each shop department.

Manufacturing. Upon this division rests the responsibility for quality production at reasonable cost. This involves proper equipment, suitable jigs and fixtures, well-conditioned cutting tools of needed types in sufficient numbers, a well-directed job and tool service group, a convenient arrangement of shop equipment and supplies. And above all, shop supervision must have enough available time and assistance to supervise, guide, and teach both skilled and new unskilled employees.

To achieve the highest possible productivity, the machines must be kept running as constantly as possible. To keep the machines running constantly, the machine operators' manual functions, between cuts, during loading and unloading, and even between setups, must be reduced to a minimum. To achieve this, certain basic principles of operation should be adhered to: Each operator must have at least one job ahead before the current job is completed. The parts must be at his machine. All required tools, as well as the machine, must be ready and in good working order. There must be ample space around the machine to permit freedom of movement and storage of finished as well as unfinished parts. The operator must have positive information regarding the speeds and feeds.

Inspection. It is the responsibility

of this division to maintain the level of quality established by the engineering division and conveyed by the shop drawings. If the inspection division is properly organized, its members can act as instructors to the machine operators. Most inspection policies are based on the principle that their purpose is to find the sub-quality or machining errors after the pieces leave each operation. A better policy would be to inspect during manufacture and intercept errors immediately before large numbers are made. In this way, errors caused by faulty tools, faulty setup, or operators' misunderstanding or carelessness can be quickly caught and corrected.

From an address by L. J. Bayer before the Society for the Advancement of Management.

Ten Commandments of Good Plant Housekeeping

AT the Cooper-Bessemer Corporation, Mt. Vernon, Ohio, and Grove City, Pa., supervisors have a "good housekeeping" program, involving the following practices:

1. Require floors to be kept clean.
2. Plan a place for every tool and appliance.
3. Provide suitable containers for scrap, oily rags, and trash.
4. Enforce rules about keeping place in order.
5. Avoid junk piles.
6. Keep material out from underfoot.
7. Have all stock well stacked, piled, or otherwise cared for.
8. Keep all passageways free of materials.
9. Adopt reasonable standards of sanitation.
10. Train new employees to keep their work places clean and orderly.

—*Management Information* 11/25/46

Keeping Supervisors Informed on the Union Contract

HUDSON MOTOR CAR COMPANY has devised a method whereby large companies can keep their supervisors thoroughly informed about union contracts and negotiations. A rotating plan of attendance by supervisors is scheduled at the beginning of the negotiations in process. Occasional departures are made from the schedule as matters relating to specific departments arise, so that supervisors may be present when subjects which pertain to their departments are discussed.

Detailed minutes of the contract negotiation meetings are also prepared and circulated on the same day to foremen. On completion of negotiations and signing of the contract, a special memorandum for foremen is prepared. This memorandum is in two sections. Section I, the contract wording, appears on odd-numbered pages; Section II, its interpretation, is placed on even-numbered pages. This memorandum, inserted in the loose-leaf "Supervisors' Handbook," provides foremen and supervisors with a ready reference to the contract wording and clause-by-clause interpretation. Insertion of the minutes of contract negotiations provides foremen and supervisors with a lasting reference detailing the evolution of the contract.

Two-way communication is maintained by means of conferences held subsequent to the signing of the contract. Meetings for upper-level supervisors are held by the negotiators, and meetings for foremen are then conducted by these supervisors. Supervisors are also provided with a means of expressing their viewpoints and those of their foremen by being included in contract negotiations.

—KING MACRURY in *Personnel Journal* 12/46

Your Inventory Control System

THE consensus of economists is that 1947 will see the top of the price climb. If this proves true, industry will need firm inventory and purchasing control to hedge the break. The following is a management check list which might be utilized in making a quick appraisal of the effectiveness of your inventory controls and policy:

1. Are studies periodically made of inventory turnover?
2. Is the purchasing department given all essential data?
3. Are sales and production budgets prepared for the guidance of purchasing?
4. Are delays experienced within the purchasing department in expediting follow-up?
5. Are all purchase orders issued with scheduled "wanted dates" specified?
6. Do all key executives know the company policy relating to inventory?
7. Is responsibility for the function of purchasing clearly defined and allocated?
8. Are competent and qualified personnel employed in the purchasing department?
9. Are policies regarding speculation, lot sizes, etc., periodically reviewed?
10. Is there a special procedure provided for emergency buying?
11. Is a perpetual record kept to reflect the current inventory status?
12. Are written reports regularly made on specific inventory matters, for example, standardization?

Budget Control.—Inventory control and purchasing require the preparation and use of sales, production, materials, and purchasing budgets. The sales budget is the basis of all forward planning and control. Regardless of the size of the organization, some forecast should be attempted even though it be subject to constant modification and readjustment. Without a tentative production budget, over-all integration and coordination becomes impractical. Working with bills of material, furnished by engineering, the purchasing department can prepare the materials budget. The detail unit material requirements are combined with the quantities determined by the production schedule and the total material needs are thus established.

The purchasing budget is developed by summarizing and interlocking the details contained in the other three budgets. From the sales budget, the maximum inventory is calculated, and the finances available for purchases are computed for each period. Release of purchase orders and scheduled deliveries are then planned in accordance with the basic needs of the production schedule and the materials budget.

The joint use of these budgets makes it possible to administer purchasing and inventory control in accordance with the over-all needs of finance, sales, and production.

If sales volume is high enough to employ all the operating capital, the purchasing department might effect an increase in turnover by modifying the application of the purchase budget. This may be done by buying in smaller quantities of raw materials and buying more often, thus keeping more of the operating capital in motion in goods that are on their way to the plant or are on the production line.

Planning Inventory Control.—The first requirement of sound planning is to prepare a master production schedule. This lists in detail all the products and pieces to be manufactured and defines the monthly or weekly quotas. In some instances, a breakdown into machining, sub-assembly and final assembly schedules may be necessary. Where such detail analysis is impractical, the average flow-time for each product should be estimated.

Flow-time is the key to the purchas-

ing agent's scheduling. He must familiarize himself with the time lapse between receipt of material and issuance to the shop, between release of purchase order and delivery of goods, between the start of machining operations and the feeding of sub-assembly lines. Within his ability to grasp these relationships lies the economic possibilities of coordinated purchasing. His aim then is to insure that the right materials are brought into the plant, in the requisite quantities, at the required time. In accomplishing this purpose, he must take care so to schedule his deliveries that no lengthy storage time will be necessary on the company's premises.

Organization.—A capable organization supported by adequate procedures and efficient records is the foundation of successful inventory control. All procedures should tend to expedite the clerical work of handling purchase orders. All work should be promptly executed. Delivery dates should be determined and specified. Follow-up of such schedules should be automatic. Too great stress cannot be placed on the necessity for careful planning at this stage. All too often the careful calculations, planning, and policy development which has preceded the issuance of the materials purchase order comes to naught because of ineffective and unwieldly methods in the purchasing department itself.

Policy.—To attain a high standard of performance in applying inventory control, constant review of matters of policy is essential. For example, in the matter of buying, temptation to speculate is ever present. However, the long-range benefits are often questionable. The loss of productive facilities through tying up of storage space, and the adverse effect on the fluid status of of the inventory, will often offset any possible benefit. Second thought will usually show that a policy of conservative buying in accordance with strict requirements will be the best.

Emergency buying stems from the occurrence of critical shortages. Wherever possible, a special short-cut procedure should be prepared for emergencies. Possibly the firm's own delivery truck should make the pick-up.

Economic lot sizes have been the subject of countless discussions and calculations. Few of the more elaborate formulae are of any practical value. The simplest procedure is to work directly from the consumption records. The lot sizes to be purchased or manufactured should be determined by dividing half the desired turnover rate into the yearly rate of use.

The tendency on the part of the production executives will be to manufacture large quantities so that set-up times are reduced through pro-rating. This, however, overtaxes stores facilities and ties up capital. The responsibility for the determination of lot sizes should be assigned to the inventory control personnel.

Reports and Analyses.—A quantitative analysis of the inventory should be made periodically. The turnover should be analyzed by product. It may be found, for example, that 20 per cent of the inventory has a turnover rate of eight per year while the remaining 80 per cent has a rate of three. Specific study of this aspect of turnover may lead to the elimination of certain lines or to the modification of manufacturing methods in order to effect better all-round performance.

The physical condition of the inventory should be frequently examined right in the plant and in the stores by

the purchasing agent. The alert agent will periodically conduct surprise visits and investigations. Deficiencies in handling, counting, wastage, shrinkage, etc., will be checked in this manner.

Simplification of processes will often permit a saving in materials. The substitution of welded assemblies for castings and vice versa, the elimination of decorative panels, and similar ideas will effect economies and can only be properly handled by periodic study and reporting.

These are only some of the important matters which should be periodically investigated and reported on by the personnel in charge of inventory control and the purchasing agent. Attention should be given also to such matters as specifications in use, the merits of simplification of processes, and the value of standardization. Constant study and review is the only way to ensure the maintenance of requisite standards.

By Keith W. Kingsland and Ray Marien. *Manufacturing and Industrial Engineering,* November, 1946, p. 17:5.

Transportation for the Future

THE advantage of each of the available methods of transportation is governed by two elements—time and cost. It must be remembered that distance is no longer measured by miles, but by time. Time costs money; therefore time in transit and cost are the main features that determine which method can be used to the greatest advantage. The fastest time in transit naturally costs the most. Therefore, use time wisely. The purchaser, through the transportation manager, has to decide which is the most dependable and efficient method to use according to requirements.

The transportation facilities that are, and will be, available are:

> air mail; air cargo by contract, or common carrier lines; railway express; parcel post; carload and consolidated pool cars; less-carload; direct rail freight; rail freight forwarder; common carrier truck or contract truck; intercoastal steamship via the Canal, or coastwise steamship to Gulf ports, thence rail to destination; coastwise steamships.

Air mail, the most costly method, should not be used for merchandise. It can, however, be used to advantage for the receipt of samples and documents, such as invoices, bills of lading, and all foreign documents which are to be checked for dutiable purposes and prepared for clearance through customs to avoid delay when shipments arrive.

Air express, operated by the Railway Express Agency, Inc., provides facilities at a lower cost on shipments weighing under 15 pounds. Over this weight, the common carrier air cargo lines have cheaper rates and are equally efficient and as fast in transit. The services of contract air cargo lines, available at lower rates, are more suitable to many lines of merchandise. These services are non-scheduled; merchandise moves as frequently as volume of tonnage demands.

Air freight consolidators are concerns that operate in conjunction with contract carriers and ship at specified rates according to a fixed schedule, lower than common carrier air line rates. The time is not far off when regular air freight forwarders will be granted permits by the Civil Aeronau-

tics Board to operate on daily scheduled flights.

Consolidation pool car services provide dependable railroad service for less-than-carload shipments at carload freight rates, plus handling costs.

In some cities, associations of kindred concerns are formed for the purpose of consolidating all commodities at a much lower rate than the rates of even the rail freight forwarders.

It is possible for shippers to avoid all the minimums by using the same consolidator as is used for express shipments. All the consolidator has to do is to receive the shipments and to list them on a B/L according to commodities. When he has received 100 pounds or more he calls the railroad to pick up and route in the way he believes to be the fastest and most efficient for particular needs.

The rail freight forwarder (a better service than direct rail) can provide truck connections from what are known as off-line points.

In placing orders to be shipped by freight forwarder, the shipper should estimate the weight of the shipment. If he does not know what portion of the order will be shipped, he should make a provision on the order that the shipment should be sent by express if it does not weigh 35 pounds.

The freight forwarder by air or rail is a middleman in transportation, using the facilities and services of a regulated common carrier. He is also regulated by the Transportation Act.

Today the forwarder moves a large percentage of the less-than-carload freight, which should be operated by the railroads. He does not own any railroad equipment or trucks. He pays the carrier carload rates and collects less-carload rates from the shipper, yet he does not transport shipments. The railroads should provide through, fast less-carload service direct to the shipper and derive the profits they now pass on to the freight forwarder.

There are transcontinental truck lines that make better time than the railroads do between specific points. The truck operators, however, have not made satisfactory progress in the payment of loss and damage claims. Use of this service therefore necessitates coverage by a transit insurance policy as protection against loss or damage to shipments. The truck companies must carry insurance according to law, but it is not considered enough to cover full value loads.

What are the prospects for skyway transportation? Air transportation is governed by the Civil Aeronautics Act; the Civil Aeronautics Administration and the Civil Aeronautics Board function as the governing bodies in compliance with the Act.

Airships are now being built for air cargo exclusively. Air transportation for express tonnage can be expected as soon as the handling and distribution on the ground can be perfected. Today the greatest delay in the use of air transportation occurs in the pick-up and delivery to the airport and the delivery between the airport and the store. Perfect timing and coordination between the two are necessary. Full cooperation is needed between the owner of the merchandise and the carrier. The user of carrier-by-air should tell the carrier what is required to make a success of the enterprise. All that the companies have been interested in is proper operation of the ship while in the air between airports of origin and destination. More attention is to be given to the correct loading of the ship for the protection of customers.

Here is a check list of questions that should be asked and answered:

1. Are you instructing the shipper how

to ship, to pack, and to classify orders?

2. Are the fastest, yet cheapest, routes shown on purchase orders, commensurate with needs of time in transit?
3. Are you ordering shipments by express when part of them could be shipped by freight?
4. Are you requesting shippers to pack the various commodities separately and to classify them properly so that each package will have the lowest possible freight rate?
5. Are you taking advantage of the various consolidations to enjoy the low cost of transportation?
6. Are you watching the condition of shipments and signing them "in bad order" when thus received?
7. What are you doing toward freight claim prevention? (Profits lost through merchandise lost and damaged in transit cannot be regained.)
8. Do you know that railroads have a loss annually of $80 million?
9. Is your annual inventory shrinkage the result of failure to file claims, or to place responsibility for loss and damage in the right place at the right time?
10. Are you fully aware of all firms who sell with freight allowances, or agree to deliver F.O.B. destination? (Loss is frequently caused by the failure of buyers to show such terms on merchandise orders.)
11. Are you insisting on manufacturers using cartons instead of heavy wooden cases?
12. Are you notifying manufacturers when shipments are damaged through poor packing?

Aimed at equipping the transportation manager with technical knowledge of all methods of transportation, governmental laws, rules and regulations, a national movement is now being fostered to professionalize transportation management.

From an address by F. W. Ashton before the Seventh Annual Controllers' Congress Pacific Coast Regional Group Convention, Portland, Oregon.

Factory Jobs Numerous After One Year of Peace

AFTER the reconversion low in February, 1946, employment gained in all the consumer goods industries and in many all-out war industries. Total factory employment of 14,578,000 in August, 1946, was only slightly below the August, 1945, figure of 15,019,000.

Fifteen of the 20 major groups employed more workers in August, 1946, than on VJ-Day. Most spectacular gains were in automobiles (29 per cent) and in the lumber and stone, clay, and glass groups, closely allied with building.

As expected, transportation equipment, which includes aircraft and shipbuilding plants, suffered the greatest decline. Only other groups showing net loss in employment were electrical machinery, chemicals, iron and steel, and heavy machinery.

—*Labor Information Bulletin* 1/47

AMA SPRING PRODUCTION CONFERENCE

A Conference of the Production Division of the American Management Association will be held on Monday and Tuesday, April 21 and 22, 1947, at the Hotel New Yorker, New York City.

Marketing Management

Salesmen's Automobile Expense Allowances

FINDINGS of Part I of Dartnell's recent study of the practices of more than 300 companies in salesmen's automobile expense control—covering salesman-owned and leased fleets—indicate: (a) There is a continuance in the trend toward increase in salesman-owned fleets, at the expense of wholly company-owned fleets—though the percentage of firms using mixed fleets, some company- and some salesman-owned, has remained constant since 1933. (b) While fleet operators reported costs per mile at around 4 cents, the national average for per-mile allowances on 3,836 personally owned cars is 5¼ cents—the highest reported in many years, with no firm planning a reduction. (c) Payment on a flat mileage basis is at present the most popular method for handling salesmen's automobile allowances.

In discussion of reasons for preference of salesman-owned cars, an interesting legal angle was raised by an executive of a southern manufacturing company:

> We have had several instances where persons injured by our salesmen driving cars have attempted to collect from us because the salesman did not have liability insurance, or did not have enough—or because they simply thought they could collect more by making us parties to the suit.
>
> Courts ruled that we had no responsibility. The Court of Appeals of our state affirmed the lower court's decision that our salesmen were independent contractors furnishing their own transportation because we had no interest in the car, did not furnish it, did not specify how and when or in what sequence the salesmen should make their trips; our salesmen could travel muleback, horseback, or by oxcart, if they so desired, because they furnished their own transportation.

Flat mileage allowance was the method of payment of salesmen preferred by 54 per cent of the companies reporting in this investigation; 9 per cent use a sliding scale variation of the mileage allowance; 4 per cent, flat time payment; 10 per cent, a combination of time and mileage; 13 per cent pay expenses plus an allowance; 10 per cent pay flat commissions which include expenses. Whatever the method of payment, most executives are in agreement that the allowance should be based on the assumption that salesmen are driving cars in the lower price bracket.

Flat Mileage Allowance. There seems little question, according to the survey, that, despite the popularity of this method of payment, the proved inequalities of it will lead to its gradual abandonment among firms operating outside of extremely localized areas where driving conditions are nearly the same for all salesmen. That it is not practical for the operation of a fleet of any size is indicated by the tendency on the part of the majority of firms reporting to make alterations in mileage rates by full cents rather than fractions, despite the fact that a change of one-half cent per mile may make a difference of several thousand dollars in operating expenses for the year—a tendency which has become increasingly marked in recent years. Union negotiations on the subject of flat mileage allowances enter also into the factors that will probably determine the future of this method of payment.

Recommended Payment Procedures. In general, results of the survey seem to point to the use of the sliding scale and a type of allowance—increasing in popularity among operators of personally-owned fleets—based on combination of a fairly low mileage rate with a monthly or annual flat sum payment to cover fixed expenses, as the methods of payment best suited for the majority of firms to the considerations of: administrative simplicity, justice to the salesman, and cost.

Depreciation Allowances and Reserve Funds. Provision for payment of depreciation charges by the company is most common in setups where the depreciation is figured into flat monthly payments given in conjunction with low per-mile allowances. Connected in many cases with the depreciation fund is a reserve system under which the salesman receives only part of his allowance in cash and the balance is held by the firm until such time as he wishes to purchase expensive accessories, insurance, or a new car.

Payments for Insurance. Exactly half of the reporting firms pay part of the bill for insurance on salesmen's cars. Most common types paid for by the companies are property damage and public liability, being carried by about one-third of all organizations. Blanket liability policies to protect the company are carried by 12 per cent. Other types of insurance are generally considered the financial responsibility of the salesman; 9 per cent of firms pay for fire and theft; 9 per cent, for collision insurance. This breakdown does not indicate in which cases the firm paid the entire bill and in which the cost was divided with the salesman.

Though they may not share in the cost, many organizations require the sales force to take out insurance. Property damage is required on cars driven on company business by 53 per cent; public liability by 44 per cent; collision by 25 per cent; fire and theft by 23 per cent, riders' insurance by 6½ per cent.

Major trends that emerge from Part II of the survey—covering operation of company-owned fleets—point toward: (a) decentralization of fleet operation in many companies, with record-keeping at the district level rather rather than in a central office; (b) serious questioning on the part of fleet operators of the value of record-keeping on so extensive a scale as was the custom prewar; (c) lowering of the annual mileage point at which a salesman is furnished with a company-owned car; (d) a national average of 5 cents on per-mile flat allowance payments.

The present cost of fleet operation per car per mile averages out to 3.7 cents, only a slight increase over the 3.5 cents reported in 1940. This figure, however, is considerably distorted by the extremely low figures reported by operators of five or six very large fleets in the group surveyed. Costs as high as 7.6 cents were listed. The average, if adjusted for the effect of the few companies mentioned, would be in the neighborhood of 4.5 cents. Cost-per-mile figures are further distorted by the differences among companies in accounting procedure in depreciating cars. This factor assumes greater importance in view of war conditions than it would under normal circumstances. Some companies are carrying half their fleets at $1 valuation on their books at present with resultant low operating costs per mile.

Mid-1946 witnessed the establishment of the Baltimore firm of Peterson, Howell, and Heather, which is aggressively seeking to convert salesman-owned fleets into company-owned fleets,

with its organization taking care of all administrative detail. If this new development in the field of sales management proves successful, it may lead to broader future use of company fleets, as the firm takes over the entire problem of purchasing, record keeping and analysis, and supervision of fleets for its clients.

Another major innovation which may have an important effect on the future of company-owned fleets is Liberty Mutual Insurance Company's plan to trade in its entire fleet annually, repay the salesmen at the flat rate per mile of 1.5 cents for business mileage, and permit unlimited personal use of the car by the salesman and members of his immediate family. Regarding this program, one of the firm's executives had this to say:

> . . . From the company's point of view, it simplifies our record keeping tremendously, makes preventive maintenance and repair costs negligible, reduces accidents, and ends the depreciation problem entirely. Such accessories as tires and batteries don't ordinarily need replacement within the year.
>
> The dealers will not only give us a much better allowance on a one-year-old car; they are also much more interested in us since we have decided to purchase 1,000 new cars each year instead of 350.
>
> The salesman, for all practical purposes, has his own car. So long as it does not interfere with business, unlimited use is permitted by the man and his family. He may select the make he prefers in the lower price range, or pay the difference annually and drive a heavier car. If any of the men do not want to come in on the arrangement, we have also made available a conventional plan under which we pay all expenses and the man repays us at the rate of 2.5 cents for personal mileage.
>
> We feel strongly that there is not enough give-and-take in most company fleet arrangements. This system recognizes the individual's exchange for his paying such bills as garaging, washing, and other incidentals. The 1.5 cent mileage allowance is more than adequate to pay for gas, oil, and grease; in a few states where gasoline taxes are high, we will pay 1.75 cents a mile. So far, all the men in areas where this plan is in operation are enthusiastic about it.
>
> This program was not inaugurated on a hunch. Careful cost studies have been made which show that the increased trade-in value and the reduction in clerical expense will make it cheaper to operate on this basis than on our former system, where we traded every third year and charged for personal use. Even if the two systems worked out to about the same cost, there would be distinct psychological advantages, both from the salesmen's and the customers' points of view, in having our staff driving new cars.

Though the postwar situation in regard to company-owned fleets is confused, there emerges the fact that such fleets still offer opportunity for substantial savings in operation if average annual mileage is high enough. In the case of an organization which has salesmen traveling widely different annual mileages, shifting the high mileage men to company cars offers a useful check on the mileage allowances paid on personal cars.

From *Salesmen's Automobile Expense Allowances—Parts I and II.* The Dartnell Corporation, Chicago, 1946. 46 pages.

Operations of Consumers' Cooperatives in 1945

DESPITE difficult operating conditions, consumers' cooperatives showed continued progress in 1945, reaching new highs in membership, business, and value of goods produced. Local associations had a combined business amounting to $669,856,000, of which distributive associations accounted for $657,500,000, and service associations for $12,356,000. The distributive and service business of central organizations amounted to $186,600,000. Goods produced in cooperative factories were valued at $60,578,000. Nearly 3,600 local associations in the United States at the end of 1945 were members of regional wholesale associations.

—*Monthly Labor Review* 11/46

The Consumer Dollar Is Due for a Stretch!

FROM where collar-frayed Mr. Consumer stands, a happy historical repetition is not too far around the corner. That dollar in his pocket is about to get stronger and more self-respecting. Pretty soon it will be buying a lot more things than now.

The prospective historical repetition is the price break of 1920. It may not be as sharp this time, or it could be sharper. But that 1947 will see it well under way by mid-year now seems beyond question.

The year 1920, like 1947, was the second full, peacetime year after the guns stopped barking. And before it was half spent, prices of goods to meet consumers' needs went over the top like a chain of roller-coaster cars and started a roaring descent. First textile prices went down, then food costs, and finally by summer all manufactured goods prices followed. Before the year was out, textile prices had been slashed nearly in half. Food prices had been cut one-fourth. Prices on manufactured goods had been nipped a fifth.

What knocked them down? Basically, two things: high production and consumers' "resistance" to lofty prices.

A survey of the simplest economic factors shows both these heavy sledge hammers again steadily pounding atop the lofty stakes of today's prices. They will continue to pound—and cheerful "no recession" talk won't stop them.

The war-sired scarcity of goods Mr. and Mrs. Consumer and the younger Consumers like to have has been so acute as to amount almost to a vacuum. But how rapidly have factory wheels been humming to fill up the void? A glance at the record is sobering to those who consider prices on a one-way road. Before last Thanksgiving, U. S. factories were grinding off goods in a volume far more than double that of 1920, and three times as great as in 1921. Production was half again as high as prewar 1940—a good year itself.

As early as last October shipments of washing machines were running 70 per cent above the 1940-41 average. From the prewar level, manufacturers' shipments of radios were up 68 per cent, of vacuum cleaners, up 64 per cent, of electric ranges, up 60 per cent. This high-powered production pattern does not mean that people can buy all the things they want now. But it does mean that the nation's consumer goods cup, still far from full, may be suddenly found splashing over the rim a bit before many months pass.

The production flood has had food prices cracking since last October. Many textile item prices are getting the knife at the retail level. Merchants have whacked as much as a third off prices of some small radios. Here and there a retailer knocks $10 off a vacuum cleaner price tag.

The second factor, consumer "resistance," deserves some analysis. The truth is that in many cases it is simply inability to buy at today's kite-high prices. The man who goes into a store for house furnishings today has to lay down about $170 for the articles that would have cost him $100 in mid-1939. The small income earner who saw automobiles at around $800 in 1939 now finds them priced at close to $1,400—without "extras" and before taxes. If he wants to buy a washing machine for his wife, he'll find it costing him almost half again as much as in 1939. One

automatic washer which sold for $198 in 1940 now brings around $270.

Here the "resistance" and "ability" question arises: Just how many cars and washing machines can the average American buy—after he has bought clothes for his family at prices about 70 per cent above the 1939 level and paid grocery bills more than double those of prewar days?

It's true that a bituminous coal miner makes an average of $62 per week and an auto worker earns $53 a week. But the average employee in the nation's thousands of retail stores makes only $33 weekly. And while national income has soared from $71 billion in 1939 to above the $170-billion-mark currently, a large segment of the public has received a far smaller income gain than these figures indicate.

It is estimated that almost half the families in the country have an income of less than $2,000 yearly. That's about $38 per week. No higher mathematics are required to understand the "resistance" of these people to higher prices.

The Wall Street Journal, January 16, 1947, p. 1:1.

How Advertising Is Planned: A Survey

A RECENT survey by the Direct Mail Advertising Association, in which information was gathered from 876 companies throughout the United States, indicates that budgets for all advertising for 1946 ranged from a low of $200 per year to as much as $8,000,000 for a single corporation. The 776 companies reporting on this question indicated that a total of $1,333,376,587.33 was budgeted for the year.

Broken down, the figures indicate that 517, or 66.7 per cent, of these companies' budgets provided for expenditures under $100,000 (almost half of these were under $20,000), with approximately another 25 per cent having budgets ranging from $100,000 to $400,000. Only 24 companies, or 3.1 per cent of those surveyed, indicated that their budgets passed the million-dollar mark.

Only 555 companies, or 63.6 per cent of those surveyed, were willing to reveal the percentage of gross sales normally appropriated to advertising, or the statistical average, if known. Their figures averaged 7.26 per cent of gross sales for all advertising.

Asked what percentage of the total budget is spent for direct advertising (including direct mail, plus all unmailed printed promotion literature, dealer helps, printed point-of-sale material, house organs, catalogs, printed public relations materials, annual reports, package inserts, calendars, etc.), respondents furnished a wide variety of figures, ranging from 10 per cent for direct advertising for petroleum and its product to 92.2 per cent for the mail-order business. The straight arithmetic average of 806 companies' figures showed that 43.9 per cent of the total budget goes to direct advertising.

Respondents indicated that the advertising budget is determined by figuring a fixed percentage of actual sales for the past year (70 companies); by figuring a fixed percentage of estimated sales for the coming year (179 companies); by estimating a definite amount to accomplish a given end (462 companies); by setting a definite amount to meet the efforts of competitors (21 companies); and by combinations of the above methods (76 companies).

Of the 771 companies furnishing information regarding the time the budget is fixed, 674, or 87.4 per cent, report that the budget is fixed annually, and of these almost half indicate that the budget for the year is set in December, January, or February. Others prepare the budget winter and summer, spring and fall, quarterly, and monthly.

Asked whether any market research was conducted in advance of direct advertising, 483 of the 845 companies responding answered yes. Of these, 87 carry on their research by mail, 192 prefer personal contact methods through salesmen, dealers, their own or outside research organizations. The largest number of "yes" respondents, 198, use both mail and personal contact in pre-planning research.

Packaging

Performance Standards for Shipping Container Testing

MOST reliable among the recognized tests for establishing performance standards for corrugated container testing are the incline-impact, the drop, and drum tests. This was the opinion advanced by Dr. J. H. Toulouse, chief engineer, quality and specification section, Owens-Illinois Glass Co., Toledo, Ohio, at a recent Chicago meeting of the Industrial Packaging Engineer's Association of America.

"Personally, I place a lot of confidence in the incline-impact test because I think it closely follows transit hazards," he said. The drop test is Dr. Toulouse's second choice because it can be controlled more easily than the drum test, which he rates third. Vibration machines and cushion test meters are not, in Dr. Toulouse's opinion, performance testing devices, but they are valuable in determining whether or not a test machine duplicates a field condition and in determining what standard of performance on the test machine is needed. Dr. Toulouse did not discount Mullen, Cady, or Beach tests but he said that, like the vibration and cushion meter, they fail to measure specifically the amount of protection given the product.

Dr. Toulouse repeatedly stressed that the greatest hazard is internal, assuming that the outer container has good resistance to in-transit damage. He believes that there is ample need for compression testing for articles not capable of bearing loads, but since bottles do have great load-bearing powers—sometimes far above that of the outer shipping container—Dr. Toulouse finds it inadequate for his purposes at Owens-Illinois. For example, he said that a steel drum full of bottles would arrive as broken glass if no inner protection were used, yet the drum has enormous load-bearing qualities. He believes that the standard method of conducting the compression tests, where container is first stripped of every element that gives protection to glass, is not consistent with scientific methods. Since static tests do not measure dynamic cushioning, they do not meet the need of shipping industry for a universal test of performance, he pointed out.

Owens-Illinois is attacking the problem of determining the size of the sample from the standpoint of laws of probability. Many specifications call for 5 or 10 tests, and Dr. Toulouse believes that this is a woefully inadequate number for tests of major importance. If differences are small, Owens-Illinois makes 100 or more tests. In Conbur testing, Owens-Illinois does not use any obstruction between dolly and backboard, because reaction of container changed when protruding bar was used and breakage took a different location in container. Apparently, the momentary friction between dolly and container, until dolly struck backboard, softened the blow, Dr. Toulouse said, and the container no longer "bounced."

In shipping cartons of glass containers, there are two general types of hazards, according to Dr. Toulouse. One exists when the container itself is in motion relative to its surroundings, as when it is being stacked, carried, dropped, thrown, used as a cushion for

other cases, or as a stepladder. These actions are largely manual and reflect human efficiency, training, and attitude. The other exists when the container is supposedly at rest while in transit in a freight car or other vehicle, but where the motion of the vehicle, its acceleration and deceleration, transmits a force to the carton and the carton reacts with a lag in time that usually results in the motion of the carton being out-of-phase with the motion of the carrier. This motion may be lateral, vertical, or both.

"Fundamentally, these manual handling hazards and the transit hazards produce different kinds of damage, and this damage may be best reproduced by different tests," Dr. Toulouse continued. "When shipping containers for glass bottles are placed in a row, or on a pile of similar containers, we can readily analyze the amount of cushioning. If the container has a single outer wall, there are two sheets of corrugated or other board between adjacent bottles when each is in a different carton. There is only one such sheet between adjacent bottles within the same case. This immediately focuses attention on the adequacy of the inner protecting material. Between two bottles in a vertical plane, there are usually four and, at the least, two, sheets of board between bottles.

"When the Consolidated Classification Committee proposed the addition of an inner liner and a top and bottom pad, the number of sheets between bottles in adjacent cases rose to four in the horizontal plane and six in the vertical plane with no addition between bottles in the same carton. The proposed added material increased protection where protection was already great, but we know that the mechanism of breakage is usually away from the side that is impacted. In one extended series of such tests on the same bottle stock and carton stock, Owens-Illinois found that only 5 per cent of the breakage was on the side against the backboard; 32 per cent was in next cell removed; 28 per cent was in third cell from backboard; and 34 per cent was in the cell furthest from backboard." (A one-dozen style case was used in this test and bottles were arranged in 3 x 4 pattern.)

Packaging Parade, October, 1946, p. 56:2.

PACKAGING CONFERENCE AND EXPOSITION

A Conference and Exposition of the Packaging Division of the American Management Association will be held on Tuesday, Wednesday, Thursday, and Friday, April 8-9-10-11, 1947, at Convention Hall, Philadelphia.

What Is Packaging Cost?

IN the period immediately ahead, if current signs can be relied on, every element of cost is going to be the object of severe scrutiny—and packaging will come in for its share. The packaging cost question is constantly being raised—now more insistently than ever—but it is difficult to arrive at concrete answers. While the elements or factors that comprise packaging cost may differ in degree of importance or dollar volume represented from one business to another, a discussion of the principles underlying those elements would be helpful to practically every line of business. To obtain a composite picture of current practices with respect to those elements, the editors of *Modern Packaging* wrote to a carefully selected list of executives in various lines of business, asking the basic question, "What constitutes packaging cost?" This article is the result of an analysis and a synthesis of the many replies received.

It is apparent that comparatively few companies segregate packaging expense as a separate cost in their accounting systems. This may result from the rather widespread belief that all packaging expense should be charged to the finished product; or it may be traceable to the idea that many of the elements in packaging cost defy clean-cut accounting analysis. And yet, if it were possible to arrive at a comprehensive list, inclusive of all the elements of cost that enter into package planning and package production, it should then be easily possible to segregate these costs—and many obvious advantages would accrue from the process.

Packaging goes through three phases, each with its distinctive elements of cost differing somewhat from the others. The first of these phases is package planning, research, and development, and at this stage costs are higher than for normal operation. The second phase involves the procurement problem, applicable both to the development stage as well as the stage of normal operations. The third stage is concerned with the problems of the packaging line in normal production and involves such routine operations as forming, filling, closing and loading for shipment.

Costs incurred during the developmental stage should be allocated as follows: *Charge to package research or development account*—selection and testing of experimental materials; costs of experimental materials; and direct overhead for package planning. *Charge to legal expense*—the registration of brand names, trademarks, and other legal costs. (Trademark and brand name registration may be treated as a capital expense, thus permitting it to appear as an asset on the balance sheet.) *Charge jointly to package research and to advertising*—art work, designs, and advertising copy preparation, plus initial costs of plates, patterns, molds, or dies. *Charge to promotion expense*—the costs of determining consumer package preferences. Overheads from other departments will automatically be distributed over the above accounts.

The purchasing department performs important procurement functions in connection with packaging costs. It is obvious that the burden on the purchasing department can be heavier for work in the development stage than for normal operations, and the extent of its services may be entirely out of proportion to the dollar volume of purchases. In such cases, the practice of letting the general overhead of pur-

chasing carry the load can be very misleading in computing development costs. It would seem, however, that in most instances, while it might be possible to draw the line very sharply and thus produce accurate accounting results, those results might hardly be worth while. Over a period of months, the general distribution of purchasing department overhead would provide reasonable accuracy.

For normal operations, the distribution of overhead expenses calls for sharp and accurate thinking. Companies with minutely divided accounting systems may accumulate all costs relating to packaging under the packaging production department. These costs would include as major classifications the following items:

A. *Containers:* Purchase price and inward freight of *all* packaging materials. (Some concerns include here shipping room supplies.)

B. *Direct labor:* All wages for preparatory operations (such as bottle washing, etc.) and the operations of forming, filling, closing or capping, labeling, cartoning, wrapping, inspection and loading in containers.

C. *Overhead charges directly related to packaging:* Salaries of supervisors and clerks; pay for sick leave, holidays, and vacations; wages for relabeling or re-cartoning; wages for materials handling; wages for maintenance of equipment, including machine setup, size change-overs, etc.; supplies requisitioned; power, fuel and water pro-rated for the department; depreciation based on life expectancy of the equipment; workmen's compensation and group insurance; payroll taxes; container control—i.e., cost of inspection of container materials received, to check quality specifications, etc.

In addition to its own overhead burden, the packaging department, or the cost of packaging, must carry its portion of general overhead. Accurate determination of packaging cost, therefore, will include its pro-rated share of the cost of purchasing, production planning, industrial engineering, rent, insurance and taxes, storage and maintenance, etc.

It should be noted that two types of materials—package inserts and display materials packed with the product—are sometimes charged to packaging, though they are not legitimate packaging expenses. One company, at least, sharply segregates these charges, absorbing the handling costs, but the materials themselves are charged to advertising. Likewise, the excessive costs of introductory lots used, say, for market testing might perhaps better be charged to advertising or promotion.

In the final analysis, and apparently in the majority of cases, the complete packaging cost is a charge against the specific product—which is as it should be. In reality, product and package comprise a unit, and the selling price must include not only the product itself but also the costs incurred in getting it to the user. In the carefully thought-out cost system, all such items will find their way into the factory cost for the given product.

But it should be made possible, under a modern packaging cost system, to segregate charges for ingredients and product processing from those for container material and packaging operations. Thus, if a manufacturer finds his product competitively "overpriced," he will have some basis for deciding where to cut costs.

In the absence of hard and fast rules for proper percentages of package cost, each individual company must determine for itself what the correct ratios

are. But if true packaging costs are to be determined, here are two musts for making computations: Include *all* elements properly chargeable to packaging, and don't saddle packaging cost with burdens it should not carry.

Modern Packaging, December, 1946, p. 100:4.

Financial Management

Trends and Techniques in Stockholder Relations

THROUGH the adoption and expansion of sound public relations policies and practices, alert managements constantly strive to maintain the confidence and support of their many stockholders. To obtain a composite picture of what they're doing along these lines, and how well they're doing it, *Financial World* queried 1,000 corporations with shares listed on the New York Stock Exchange and the New York Curb Exchange, plus many that are actively traded in the over-the-counter market.

A decade ago the annual report—mostly in abbreviated form—was distributed only to stockholders, bankers, brokers, financial publications, investment services and financial editors. This was as it should have been, because the statement was usually too technical for other than a student of finance, an accountant, or a lawyer. But the more informative and attractively illustrated annual reports are now being sent to other interested persons. Of the respondents, 45 per cent distributed their 1945 stockholders' annual report to employees. An additional 10 per cent prepared a separate annual report for employees, while 14 per cent digested the annual report in the company's employee house organ. Thus a total of 69 per cent presented and explained their annual financial statements to their workers last year.

During the past year 30 per cent of the respondents sent their annual reports to dealers, distributors, and agents. It was also found that 28 per cent distributed their reports to customers—mostly wholesale buyers with large accounts. Only 1 per cent prepared a special report for consumers, and these were all public utilities—electric, gas, and telephone.

Less than 3 per cent distributed their reports to their suppliers of raw materials, and the same percentage sent them to credit agencies, such as Dun & Bradstreet, etc. Only 1.5 per cent volunteered to send their annual reports to competitors. On the other hand, 21 per cent indicated that they sent their report to anyone "on request."

In the realm of community relations, it is interesting that 11 per cent mailed their 1945 annual reports to civic leaders in cities and towns where branch plants are located—or in the communities touched by the right-of-way, as in the cases of railroads, traction lines, or bus companies.

Around 12 per cent of the corpora-

tions make it a practice to mail their annual reports to college and university libraries, but only 5 per cent of the total send them to public libraries.

The study also revealed that not all companies distribute their annual reports for publicity purposes. The largest number, 92 per cent, send their annual reports to financial publications, investment services, and statistical agencies. But only 84 per cent send them to the financial editors of newspapers.

In view of the efforts by both the SEC and the stock exchanges to encourage corporations to release more information, the following figures are of interest: Quarterly reports were published during the past year by 35 per cent of the respondents while 10 per cent issued semi-annual or mid-year earnings statements. This means that for 55 per cent of the corporations, the annual report is the only contact with the stockholder during the year, except for dividend checks.

Of the companies sending quarterly or semi-annual reports, half are mailed with the dividend check and half are sent under separate cover. It is noteworthy that 86 per cent of the interim reports are printed, while only 13 per cent are multigraphed or mimeographed. Of the printed statements 60 per cent are four-page leaflets, 21 per cent are two-page single sheets, and the balance are six-page folders, and eight-, 12-, and 16-page booklets.

While it has been surmised that many companies were mailing out inserts or "stuffers" as free riders with the dividend checks, the returns show that only 36 per cent follow this practice regularly, and 10 per cent do it occasionally; 58 per cent enclose nothing with the dividend check.

Since comparatively few stockholders are in a position to attend the annual meetings of their companies, respondents were asked whether they sent stockholders minutes of the meetings. While 13 per cent do, some of these provide only a digest of the happenings; 15 per cent send the minutes on request; 72 per cent never mail out such information. Less than one per cent of the companies surveyed hold regional meetings throughout the country.

Financial World, January 22, 1947, p. 22: 5.

Foreign Trade, Tax-Wise

MANY corporations are about to be created to engage in foreign trade, and many more will expand their international trade activities in the very near future. But before these corporate organisms can be shaped to adapt themselves to the needs of international trade, a choice must be made of the type of corporation to be formed. Two factors are important and must be considered in making that choice: One is the geographical factor, i.e., where the trade will be conducted; the other factor is the important one of tax burden. Tax obligations and benefits differ widely for each type of corporation.

The following is an outline of the United States taxes that must be paid by various types of foreign trade organizations:

1. *A company organized in the U. S., doing all or part of its business in foreign countries*—will be taxed on operating income like any domestic corporation; it must pay full normal and surtaxes on all income.

2. *A company organized in a foreign country, doing all or part of its business in foreign countries*—does not pay a tax on operating income from the foreign business; it pays a tax only if engaged in trade or business in the U. S. and then only on income from sources within the U. S. If it does not conduct manufacturing or like activities in the U. S., and sales are conducted abroad, then no gross income is derived from within the U. S. Investment income from U. S. sources is taxed in any event, except profits from sales of stock if corporation is not engaged in business in the U. S.

3. *A company organized in U. S., doing business in the U. S. possessions of Puerto Rico, the Canal Zone, Guam, American Samoa, Wake Island, and Midway Island*—is treated like a foreign corporation. It pays a tax only on income from sources within U. S. and amounts received in the U. S. if 80 per cent or more of gross income for three years before close of fiscal year (or for the period during which business has been transacted within a possession, if less than three years) comes from sources within U. S. possession, and 50 per cent or more of gross income is from active conduct of a trade or business within a U. S. possession.

4. *A corporation organized in the U. S. to do business in the Western Hemisphere, including North, Central, or South America, the West Indies or Newfoundland*—pays the 24 per cent normal tax of corporations; but is not subject to the 14 per cent surtax on corporations if 95 per cent or more of the gross income for the three-year period immediately preceding the close of the year (or for the period during which business was transacted if less than three years) was derived from sources outside U. S., and if 90 per cent or more of the gross income for that period was derived from the active conduct of a trade or business.

5. *A corporation organized in U. S. under China Trade Act to do business in China, including Manchuria, Tibet, Mongolia, Hong Kong, Macao, and territory leased to foreign countries*—gets a credit against net income for normal and surtax. This is based on ratio of the par value of the stock owned by U. S. and Chinese citizens, and U. S., Chinese, and possession residents to total par value of all stock outstanding. Credit is limited by "special dividend" distributed to stockholders and certified to the Commissioner by the Secretary of Commerce. Full normal and surtaxes are paid on amount over credit.

These are the basic facts governing the tax liabilities and benefits extending to various types of foreign trade organizations. However, further soundings must be taken in the perilous tax waters, since a corporation for the conduct of foreign trade cannot be organized intelligently without knowledge of considerably more tax facts. The following are seven important tax questions and their answers:

1. *What income taxes can be avoided?* A domestic corporation doing business in foreign countries pays all taxes. A foreign corporation doing business outside the U. S. is exempt from all U. S. taxes, except on investment income from U. S. sources. Domestic corporations qualifying as Western Hemisphere companies are

exempt from surtax; those doing business in U. S. possessions pay tax on U. S. source income only, and income received in U. S.; and those qualifying as China Trade Act companies get credit against net income based on ownership of stock by U. S. and Chinese citizens.

2. *Can the tax be avoided on unreasonable accumulations, even when earnings are unnecessarily accumulated?* In the cases of domestic corporations doing business in foreign countries, and domestic corporations qualifying as Western Hemisphere companies or China Trade Act companies, the answer is no. In the case of a foreign corporation doing business outside the U. S., the answer is yes, as to foreign income, and in the case of domestic corporations doing business in U. S. possessions, yes, as to possession income.

3. *Is credit granted for foreign taxes paid?* In the cases of domestic corporations doing business in foreign countries and domestic corporations qualifying as Western Hemisphere companies, yes. In the cases of foreign corporations doing business outside the U. S., and domestic corporations doing business in U. S. possessions or qualifying as China Trade Act companies, the domestic parent gets credit against its tax for foreign taxes paid by subsidiary. Before the foreign trade organization is set up, tax laws of the foreign country or countries involved should be carefully studied.

4. *Can a domestic parent get a dividends received credit?* Yes, in the cases of domestic corporations doing business in foreign countries and domestic corporations qualifying as Western Hemisphere companies. No, in the cases of foreign corporations doing business outside the U. S., and domestic corporations doing business in U. S. possessions or qualifying as China Trade Act companies.

5. *May the corporation be a member of an affiliated group for purposes of filing a consolidated return?* Domestic corporations doing business in foreign countries and those qualifying as Western Hemisphere companies may. Foreign corporations doing business outside the U. S., and domestic corporations doing business in U. S. possessions or qualifying as China Trade Act companies, may not.

6. *May the corporation be liquidated tax free into the domestic parent?* The answer is yes for domestic corporations doing business in foreign countries, and domestic corporations qualifying as Western Hemisphere or China Trade Act companies, or doing business in U. S. possessions. Foreign corporations doing business outside the U. S. may not be so liquidated, unless it is proved prior to exchange that one of the purposes is not avoidance of taxes.

7. *Does present formation, to take advantage of above benefits, result in tax troubles?* In the case of foreign corporations doing business outside the U. S., tax troubles will not result if the foreign corporations are organized to do new foreign business. They may, if a new corporation takes over the activities of the old corporation. For all other types of companies mentioned in each of the foregoing answers, present formation, to take advantage of above benefits, will not result in tax troubles.

These are but sketchy outlines of the tax pictures for various types of foreign trade organizations, but they should suggest the importance, to all companies now organizing or reorganizing for foreign trade, of assembling

and studying the tax provisions pertaining to each type of organization. Changes must also be followed carefully, since it is probable that both tax law and tax rules relating to foreign trade are due for expansion and elaboration in the near future. It is but simple wisdom that corporate management be aware of these rules and keep abreast of them. Failure to do so may mean arrested development and perhaps financial failure.

Dun's Review, December, 1946, p. 17:5.

Insurance

Depreciation Cover Assures Added Protection

IN RECENT months there has been a growing interest on the part of insurance buyers and sellers in depreciation or replacement cost insurance, under which the carrier agrees to replace damaged property with material of like kind and quality, without deduction for depreciation. Discussing this form of coverage before a recent meeting of the Pittsburgh Insurance Buyers, D. W. McStea, assistant manager of the Allegheny County Department of National Union Fire, observed that it represents a radical departure from the fundamental theory of insurance and consequently has given rise to sharp differences of opinion in the business as to the soundness of such a procedure.

Companies writing this insurance generally confine the coverage to buildings and building service equipment pertaining thereto and a part thereof. It is customary to issue a single policy rather than one policy on the building on the basis of sound value and another representing depreciation.

For example, in insuring a mercantile building with a sound value of $200,000 and a replacement cost of $300,000, the policy would be issued for a face value of $300,000 at the published building rate and the depreciation endorsement would be attached without additional premium. Obviously, however, the insured pays an additional premium by reason of the amount of insurance he is required to carry in order to comply with the 100 per cent co-insurance clause.

The insurance company shall not be liable for: (a) more than the amount insured under the policy to which this endorsement is attached; (b) any loss beyond actual cash value at the time of loss, unless the damaged or destroyed property is actually repaired, rebuilt, or replaced on the same site; (c) any loss occasioned by the enforcement of any state or municipal law or ordinance regulation regarding the construction or repair of buildings; (d) any greater proportion of any loss than the amount insured under this policy on said building or buildings bears to the total insurance on such building or buildings, whether or not such insurance contains this endorsement or is on the same interest as that described in this policy.

An important provision of this coverage requires that the property

destroyed must be replaced on the same site—otherwise the company is liable only for actual cash value or the amount recoverable under the conventional form. Without this stipulation it was felt that some insureds would seize the opportunity to rebuild the business in a more desirable and profitable part of town.

In Canada similar rules, rates and forms have been published, limited to sprinklered churches, schools, public buildings, utilities, and fireproof buildings and contents (excluding merchandise).

In America the following states *have authorized* depreciation insurance: Arizona, California, Delaware, District of Columbia (except dwellings), Georgia, Iowa, Kentucky, Maryland, Massachusetts, New York, North Dakota, Oregon, Pennsylvania, Rhode Island, Utah, and Vermont. The coverage *may not be written* in: Colorado, Connecticut, Florida, Louisiana, Maine, Michigan, Missouri, New Hampshire, New Jersey, Ohio, Oklahoma, South Dakota, Texas, Washington, West Virginia, and Wisconsin. In those states not listed jurisdiction one way or the other has not been assumed.

The National Underwriter, January 2, 1947, p. 3:1.

When Are Transportation Risks "In Transit"?

THE question as to when goods are considered "in transit" is a frequent source of difficulty in the adjustment of claims under transportation floaters. Are goods "in transit" when awaiting shipment, delayed or worked upon enroute, trans-shipped enroute by another bailee, carried about without any indicated destination, refused by consignee, held by carrier at destination, re-shipped by owner-consignee, or received by an imposter or thief at destination? The answers, or partial answers, to these questions are indicated in the pertinent decisions and statutes discussed below:

Goods Awaiting Shipment. Where the policy covers "from the time the property passes into the custody of a common carrier," goods awaiting shipment in a store or warehouse prior to delivery to a common carrier are clearly not insured. Before *actual movement* in transit commences, it has been held, goods are not "in transit." Thus, for example, where an assured loaded goods on his own truck during the evening previous to the day of shipment, and a loss occurred during the night, same was held to be not within the transit coverage.

Goods Delayed or Worked upon Enroute. To ascertain whether a delay in transit suspends transportation requires a consideration of the *length* and *purpose* of the interruption of transit.

It is well established that if the delay is commonly incidental to the movement of merchandise, once transit has begun, the delay is not ordinarily deemed to suspend transportation. A delay would be deemed *incidental* to transportation if it were no longer than is necessary for, and is intended to *facilitate,* the convenience of trans-shipment to destination.

However, where the interruption of transit is for any purpose other than the

convenience of trans-shipment, or as an accommodation to transportation, the interruption is deemed to terminate the transit. A case in point involved the shipment of oil, which, having been transported from one state to another, was then stored in stationary tanks for *business convenience and economy of distribution,* pending shipment to other markets. The period of storage was held to be not in due course of transit.

Trans-Shipment Enroute by Other Bailee. Where merchandise enroute is received by an intermediate bailee, i.e., a custodian of the merchandise enroute, but not the carrier or consignee, the question as to whether or not transit has terminated depends upon the authority of such bailee, as follows:

1. If the intermediate bailee has authority to receive the goods and redirect them to a new destination not originally intended, his receipt of the goods terminates the transit.
2. If the intermediate bailee is required to transmit the goods in accordance with the original directions, his receipt of the goods for such purpose does not terminate the transit. "He is merely a link in the transit." Thus, where goods are sent to a forwarder or packing house solely for packing and shipment in accordance with seller's or buyer's instructions, the goods are deemed in transit while in possession of the forwarder or packer for such purpose.
3. If the intermediate bailee receives the goods, to be held pending further shipping orders, the transit is considered terminated.

Carriage of Goods with No Indicated Destination. "Transportation" as applied to transit policies, means carriage or conveyance from one place to another place. Merchandise carried with no indicated destination is not within the ambit of transit coverage.

For example, where an assured had merchandise in his possession while enroute from his premises to the barber shop for a haircut, it was held that the property was not being "transported" as a specific destination was not evidenced.

Goods Refused by Consignee. Generally, goods are considered to be in transit if refused by the consignee and the carrier continues in possession of the goods for the purpose of re-shipment to shipper.

Goods Held by Carrier at Destination. Transit is normally terminated upon the arrival of the goods at their intended destination and the delivery thereof to some person other than a mere intermediate or link in the transit. However, the mere arrival of the merchandise at "the fixed terminus" does not necessarily end the transit if the goods are still in the possession of an intermediate bailee, and it is immaterial whether such bailee is a carrier or warehouseman.

But if such bailee acknowledges to the consignee that he holds the goods in his behalf and continues in possession of the goods as bailee for the consignee, the transit is deemed ended, even if a further destination is intended.

Goods Stored at Destination by Consignee. While the transit floater ordinarily covers the risk from the point of shipment until arrival at destination, the consignee terminates the risk by taking delivery outside his own premises.

A case resolving this point involved the arrival of goods at its destination shortly before the consignee's closing time, on a Saturday. The latter accepted the goods from the delivering carrier but, for his own convenience, loaded the goods on another carrier's truck to be held at the latter's garage until the following Monday. It was held in this case that the transit risk ended upon removal of the goods from the delivering carrier's vehicle.

Goods Re-Shipped by Owner-Consignee. Where goods are received by the manufacturer from mill, processor, or contractor and re-shipped to a pur-

chaser, the transit is broken and terminated upon receipt by the manufacturer. Similarly, where goods are received from the seller by the buyer and reshipped by the latter, transit is terminated when the goods are received by the buyer.

Goods Received by Imposter or Thief at Destination. Where delivery is made to an impostor or thief, rather than to a bona fide consignee, decisions on several leading New York cases seem to hold that there is no legal delivery and the transit risk is operative at the time of loss.

In one case a thief, posing as a customer, ordered the delivery of certain bonds which the assured promptly sent over by messenger to be delivered upon payment by certified check. The bonds were handed over to the impostor in exchange for what appeared to be, but actually was not, a validly certified check. In a claim under a policy covering theft "in transit," the New York Court of Appeals held that the claim was covered, stating in the course of its opinion: "To hold that transit means actual movement and not a period of rest is too narrow a construction . . . As title never passed (to the imposter) and they (the bonds) were procured . . . by common law larceny . . . there had never been any delivery to end the transit."

By Harold S. Daynard. *Bulletin No. 5,* Inland Marine Claims Association.

Survey Reveals Extent of Disability Cover

On the basis of a survey conducted by its Insurance Department, the Chamber of Commerce of the United States estimates that on December 31, 1945, approximately 40 per cent of the employees in private industry (excluding agriculture) had insurance or some other form of protection against loss of wages as a result of temporary disability. This protection was provided for these employees by private voluntary means.

Though no national survey has been made of the number of employees having protection for loss of wages through wage continuance plans, employee benefit associations or similar plans, surveys made in some states indicate that there are about the same number of employees having such protection as are covered under group accident and health insurance policies. It is accordingly estimated that on December 31, 1945, about 12,000,000 employees had protection under voluntary plans against loss of wages resulting from temporary disability. In addition, 8,640,000 individual accident and health insurance policies were in force at the end of 1945.

The survey further revealed that 97 per cent of the group accident and health insurance policies and 91 per cent of the individual accident and health policies, with both accident and sickness benefits, provided benefits continuing during total disability for a period of at least 13 weeks. Substantially all the accident only and health only policies held by individuals provided benefits during total disability for a period of at least 13 weeks.

Property Crimes on the Increase

The FBI complete report on crime figures for the first half of 1946 indicates that robbery jumped 31.8 per cent, burglary 17 per cent, and larceny 9.8 per cent over the levels for January-June, 1945.

The majority, 68.6 per cent, of the robberies during the first half of 1946 occurred on public streets and 19.3 per cent were robberies in commercial houses other than oil stations, chain stores, and banks.

It is interesting to note that, exclusive of automobiles, the percentage of property recovered decreased from 21.1 per cent during the first six months of 1945 to 18.3 per cent for the first six months of 1946.

—*The Casualty Insuror* 10/46

Survey of Books for Executives

WHO WERE THE PIONEERS OF SCIENTIFIC MANAGEMENT?

(Conclusion of review by Dr. Harry Arthur Hopf of Volume I of "The Making of Scientific Management," by Urwick and Brech)

No one will read the foregoing references without being struck with the remarkable similarity many of them reveal to the later work of Taylor and his associates. The report from which they are taken states that when, toward the end of his life, Taylor's attention was called to these evidences of prior scientific work in his field, he commented as follows: "How very incredible that such examples should have been fruitless and that such work should even have been totally forgotten." (The reviewer has been unable to verify this quotation.)

The final case in the authors' list is that of Walther Rathenau of Germany. Best known as a member of the cabinet of the government of the short-lived Weimar Republic, Rathenau was one of the leading industrialists of his country, President of the Allgemeine Elektrizitäts-Gesellschaft, economist, engineer, philosopher, statesman, and author. He met with an untimely death at the hands of two assassins while on his usual morning drive to the Foreign Office in Berlin, on June 24, 1922.

It was with some astonishment that the reviewer read of the inclusion in the first series of pioneers of a sketch of Rathenau, published in the April, 1941, issue of *Industry Illustrated*. It was not conceivable to him that, despite Rathenau's great versatility and multiplicity of interests, he could be legitimately classified as a pioneer in scientific management, nor did the following interpretation presented by Col. Urwick prove at all convincing:

> Among the pioneers of scientific management, Rathenau might easily be passed over by the unwary. Public awareness of him rests on his later political activities. In many quarters he has been regarded as nothing more than an unusually capable industrialist with a particular flair for economic and social theories and a dangerous leaning towards radical philosophies. Such a judgment is as erroneous and untrue as that meted out to Taylor ten years earlier. Rathenau's milieu was indeed different. He was not practically concerned with the day-to-day management of an industrial concern. Though firmly settled in the chief executive's chair, he differed from Fayol in looking outwards to the community around him rather than inwards to the administrative processes that he directed. Most of all he resembled Mary Follett in finding industry essentially part of the life of society, and in thinking out its basic principles in terms of all human organisation. But again he differed from her very materially in his sphere of interest; the psychological foundations of management he left untouched in favour of its social implications (p. 88).

Such generalizations derive only slender support from the quotations from Rathenau's work contained in the body of the sketch. Moreover, after a careful examination of Rathenau's *Gesammelte Schriften, in fünf Bänden (Collected Writings in Five Volumes)* the reviewer has been unable to find any references which would demonstrate that Rathenau habitually employed terms or word pictures reflecting a close mental association with the field of scientific management. That he was familiar with Taylor's work and the *Rationalisierungsbewegung* in Germany, may well be taken for granted; that as president of one of the largest industrial organizations in that country he was thoroughly steeped in knowledge of principles of organization and processes of administration, is beyond dispute; that he had a genius for clarifying complicated relationships and interpreting them on a scale of worldwide synthesis, is apparent from his writings. But that he was a pioneer in scientific management could hardly be demonstrated, in the reviewer's judgment, without robbing the designation completely of any meaning customarily associated with it.

Examination of the evidence supplied by the authors in support of their thesis has now been completed. Briefly stated, the results may be summarized as follows:

Pioneers in Scientific Management

Henry L. Gantt
Frank B. Gilbreth
Lillian M. Gilbreth
Frederick W. Taylor

Disciples and Practitioners

Henry Le Chatelier
Henry S. Dennison
Edward T. Elbourne
Charles de Fréminville
B. Seebohm Rowntree

Independents

Charles Babbage
Henri Fayol
Mary P. Follett
Walther Rathenau

This classification, in the reviewer's judgment, presents a concise interpretation of what the authors have accomplished. The first volume of their work, even under a liberal interpretation of the term, concerns itself not with "Thirteen Pioneers," but with only four. The nine other individuals may be said to fall into two groups: five who were identified with the scientific management movement in greater or lesser degree as disciples and practitioners, and four who were entirely independent of the movement and occupied positions quite special in character as far as management is concerned.

As one considers the classification, one cannot help regretting that in planning the first volume, itself a pioneer work on the subject, the authors did not endeavor to curb their tangential tendencies and concentrate upon a more comprehensive and logical delineation of the contributions made by true pioneers to the development of scientific management. Since 1942, Col. Urwick has been in possession of copious data relating to Harrington Emerson; one wonders what deterred him from using it. Information concerning other scientific management pioneers was doubtless procurable, despite the difficulties attendant upon war conditions.

The plan of the work, which is international in scope, suffers from the failure of the authors to distinguish between scientific management, as a distinct school of thought, and management in general, for the text frequently discloses the indiscriminate use of such terms as scientific management, science in management, and management, unadorned. In fairness to the authors, it is well to recognize that, whereas in this country the term scientific management is still employed very largely to connote the philosophy, principles, and techniques on the espousal of which Taylor's fame rests, this is not the case in Great Britain; there, Taylor's contribution, though appraised at its full value, is not set off against the general body of accumulated knowledge and experience. This practice has translated itself into appreciation of the value of the scientific method without any particular label attached to it, and it may well be that after the lapse of another decade or two, we shall follow suit in this country.

Whenever the authors find opportunity to "fill in some of the gaps in the first volume," the reviewer confidently expects that they will decide to prepare a sketch of Karol Adamiecki, the great Polish engineer who, in 1903, promulgated his theory of harmonization. While working completely independently of Taylor, with whose principles and viewpoints he was not acquainted, he nevertheless pursued in general the lines the latter laid down for scientific management. Without question, Adamiecki is entitled to the distinction of being included in the list of pioneers in scientific management. Masaryk, the scientist-president of Czecho-Slovakia, Limperg, the educator and scientist of Holland, Mauro, the industrialist and educator of Italy, and Thompson, the Taylor associate and management engineer of the United States, are also pioneers whose claims to consideration in this connection the reviewer would urge.

The first volume of *The Making of Scientific Management* should be characterized as a work of value for reference purposes to all interested in the ground covered by it. A tremendous amount of labor has evidently been devoted to its preparation, and, despite certain errors that have crept in, there is every evidence that no pains have been spared to authenticate the numerous statements of fact with which the sketches abound. The unusually complete bibliographies appended to the sketches and the well-arranged index will be of much practical use to any student of scientific management who wishes to enlarge upon his knowledge of the writings of a group of thirteen distinguished individuals, all of whom have won lasting recognition, if not fame, in their respective fields of activity. The authors are to be warmly congratulated upon the pioneering initiative, scholarly qualities, dramatic sense, and charm of expression which they have brought to the performance of their task. It has long needed to be done and the American management movement owes thanks to Col. Urwick and Mr. Brech for having done it so well.

(Because of space limitations, Dr. Hopf's review of Volume II of this work, originally scheduled for this issue, will appear instead in March.—Ed.)

• THE PHYSICALLY HANDICAPPED get first call on all vacancies at Botany Worsted Mills and at Traubee Products. The latter firm discovered that one in eight of its employees were in that category and had above-average efficiency.

—*Notes and Quotes* 12/46

THE INDUSTRY-ORDNANCE TEAM. By Levin H. Campbell, Jr. Whittlesey House, New York, 1946. 461 pages. $5.00.

*Reviewed by Sanford E. Thompson**

This volume is a remarkably fine record of the accomplishments of Army Ordnance during World War II. The overcoming of handicaps incident to the prosecution of such an amazing industrial program is clearly presented, and the splendid cooperation of industry with Ordnance is well brought out. Statistical information on progress in production is presented in a style which is readable and interesting to the lay reader as well as to those who have been associated with the Army operations.

General Campbell's book is of special interest to this reviewer who, as an Ordnance officer in World War I, and Consultant to the Secretary of War in World War II, was personally conversant with many of the matters described.

Production achievements in World War II emphasize: (1) the phenomenal speed with which the matériel was produced; (2) the versatility of producers in converting to products of radically different structures; (3) the skill of executives of big business in developing and managing new projects entirely unrelated to their normal production; (4) the cooperation of competitive industries.

The author ascribes the accomplishments of Big Business to "sheer grit and determination." This might be qualified. In World War I, manufacturers were equally eager to produce, but the science of production methods was little known. The difference lies in the development, during the 22 intervening years, of scientific management in the manufacturing plants. The results are clearly evident.

While schedules of finished items were often behind in World War II—giving rise to the term "guestimates" in the Ordnance Department—delays were far less than in World War I, notwithstanding the greater complications.

To illustrate, on January 10, 1918, plants that were making 75-mm. guns estimated that 532 of them would be completed by April. Only 85 were completely finished in that month, and none was ready for shipment.** In fact, out of orders for 10,000, only 143 were shipped before the Armistice in November. Other equipment was similarly in arrears.

The speed with which some of the most badly needed equipment was turned out in World War II reflects excellent production management. General Campbell cites how a farm implement concern bought an idle automobile plant on February 6, 1942, to make Light Tank M5. Four months later, on June 9, the first light tank left the plant on its trial run. Sixty subcontractors, located from California to Connecticut, aided in the achievement.

The delays in both wars were due chiefly to the difficulty in coordinating the delivery of the multitude of parts. For example, Tank M4 has 3,719 parts, 60 per cent of which were subcontracted.

One of the most noteworthy accomplishments in Ordnance was the institution of the Industry Integration Committees to which the volume refers: "By integrating all manufacturers producing a certain item, the excess component capacities, raw material stocks, machine tools, and the 'know-how' of one company were utilized to offset deficiencies in other companies which, in turn, gave reciprocal assistance to the best of their ability." The efforts of more than 3,200 prime contractors were efficiently coordinated.

The resourcefulness and ingenuity of American industry were evidenced in the utilization of machines and materials for operations foreign to their original purposes and in the simultaneous development of shortcuts. But most interesting is the story of industry's conversion of plants of entirely different background to armament production. "Thus it happened that a soap manufacturer, a tire company, a building materials company, a breakfastfood company, a soft drink company, and many other nationally known firms entered into the ammunition business for the first time." A manufacturer of paper and pulp products, with the aid of 122 subcontractors, produced a new self-propelled gun mount which required 1,900 intricate parts.

In selecting manufacturers and operators for specific contracts, Ordnance found that the quality of company organization and the executive, engineering, and operating staff was the key to getting results. The public criticized the widespread utilization of Big Business. But the reason for this was that the experience of the personnel of a large and successful organization in operating its own business fits it for undertaking new tasks and carrying them through successfully. Small plants (500 employees or less) could best be utilized as subcontractors, though in many cases the small plants were given prime contracts, which often expanded them into large plants with thousands of employees.

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* President, The Thompson & Lichtner Co., Inc., Boston.

** See this reviewer's "Increased Production for Defense Needs," *Advanced Management*, October-December, 1940.

The book, which has 28 chapters, opens with a convenient "Timetable" of principal events from January 6, 1940, to August 14, 1945. This is followed by a chapter on "The Start," giving a picture of the situation, the difficulties encountered, and the general policies agreed upon for the "Industry-Ordnance Team." These policies were worked out with the cooperation of General Compbell's personal advisory staff, Messrs. Bernard M. Baruch, Lewis H. Brown, Benjamin F. Fairless, and K. T. Keller.

Direct contact with contractors and much of the purchasing was effected through 13 Ordnance Districts. Annual procurement of the Detroit District was larger than the sales volume of U. S. Steel, General Motors, and American Telephone and Telegraph, combined.

In the chapter "Plowshares to Swords," General Campbell's illustrations of specific accomplishments—several of which have been cited here—are of special interest.

The place in the picture of "Small War Plants" is described, as are the notable construction of "New Facilities," the teamwork of the "Industry Integration Committees" (already referred to), and the "Machine-tool Panels" which helped to break the bottleneck in production. The "Research and Development" chapter speaks of the 1,300 new weapons produced—including the famous bazooka—and General Patton's approval of the semi-automatic rifle, M1, known as the Garand, saying that the latter gave each American soldier more than twice the fire power of any enemy infantryman he faced. Other illustrations of superiority of American equipment are provided under "Ordnance in Battle."

Treated in separate chapters, with illustrations of their developments, are: "Small Arms"; "Artillery"; "Tank and Automotive Equipment"; "Air Ordnance"; Ammunition." Various handicaps in production, and the improvements and reductions in cost as the war progressed, are also discussed.

The importance of "Lend-lease" is stressed, not only in its aid to the Allies—e.g., matériel to combat the robot bomb, requested by telephone, reached England in a few hours—but in giving our industry a headstart before the declaration of war. Much English-made equipment was also furnished to our troops.

The relations of Ordnance and WPB were at first conflicting, and duplication resulted from lack of clarity in the designation of functions. Theoretically, the War Production Board—consisting of civilians skilled in production—could best supervise production, but it was soon found that the War Department must bear the burden, not only of procurement but also control of production, allocating to WPB the control of raw materials—through the Controlled Materials Plan—and of machine tools, as well as functions not specifically related to Ordnance production. The Army-Navy Munitions Board, acting with advice of the Chief of Staff, solved many of the questions of priority between Army and Navy.

General Campbell has depicted the accomplishments of Ordnance brilliantly. It is hoped that comparable works on other branches will be prepared to show the extraordinary performance of all our Services.

THE FOREMAN'S PLACE IN MANAGEMENT. By Charles C. Smith. Harper & Brothers, New York, 1946. 159 pages. $2.00.

*Reviewed by A. L. Kress**

When an author prepares to write a book, it is usually wise for him to determine the particular audience he proposes to address. The jacket of this book states that it is "directed both to top-management and to foreman groups." That in itself would be a most difficult assignment in a book of this kind.

Dr. Smith, drawing on his "firing-line" experience in talking to foreman groups throughout the country under the auspices of the National Association of Manufacturers, graphically describes present-day relations between top management and its supervisory forces. Examining the vacillating and expedient decisions of the National Labor Relations Board on the matter of collective bargaining rights under that Act for supervisory employees, he outlines the rise of the Foreman's Association of America.

Not until page 147 did this reviewer get a clear picture of what Dr. Smith considers the points at issue between upper management and supervision. There he summarizes their means of solution in the following order of importance:

1. Adjustment of the salary question
2. Establishment of a seniority system
3. Formulation of a program for mutual and regular discussion of company policies between executive and supervisory management.

Dr. Smith believes that "in general, foremen are grievously underpaid from any point of view." He bases his conclusion largely on 1938 census data. He also emphasizes that the "grievance of the foreman in the matter of salary arises from the *smallness of*

* Assistant to President, Republic Aviation Corporation, Farmingdale, N. Y.

the pay differential as between himself and the worker he supervises." Unquestionably Dr. Smith, while perhaps generalizing from insufficient facts, is correct in contending that the lack of adequate differentials between supervision and employees is the number one problem in the relations between top management and supervision. Unfortunately, we have very little data in the way of salary surveys for supervisory employees. Nor does the answer lie in any trite formula for figuring differentials percentage-wise. Too many of us still remember the 10 per cent rule certain government agencies arbitrarily adopted under wage stabilization. Certainly every company ought here and now to take a look at its supervisory rate structure and see that its foremen are fairly compensated.

Dr. Smith thinks every plant should have "sound and well-documented seniority" for its supervisory employees. He does not suggest straight seniority but a system to be based on "a fair appraisal of relative weights to be accorded to seniority, merit, and present or potential ability in promotions, and to give top or near-top seniority to foremen returning to the rank and file." He would supplement this with a retirement plan for foremen.

Dr. Smith believes that "the spread of supervisory unions undoubtedly means the end of free management in America." Certainly it will mean the lessening of the efficiency of industry. No one who is sincerely interested in seeing the standards of living of the American people raised can view that prospect with equanimity. He urges every company to develop a program for discussing company policies with supervisors. Too many companies have no such program—are not even aware of its potential value. Dr. Smith further believes industry is failing to make effective use of foremen to sell ideas, to sell the company and its products, and the free enterprise system to those under him. Unquestionably, many of us *are* overlooking this phase of worker education.

I would not recommmend Dr. Smith's book for general reading by foremen as a means of giving them a clearer picture of their place in management. I think his attempt to address himself both to top management and supervision was not well-advised. Top management can, however, read this book profitably, even though it may be a little lengthy in spots and often is critical of top management itself. The time has come for every company to *prove* to its supervisory force that it is part of management rather than continuing to rely on that form of wishful thinking so aptly reflected in Dr. Coué's famous line, "Every day in every way we are getting better and better."

The solution of the problem will demand more than words now. It will require a concrete, consistent demonstration on the part of top management that its right arm—the supervisory staff—is fairly compensated, kept fully informed, brought into frequent and regular contact with the "higher echelons," treated as the company would have all employees treated and, finally, convinced that its day-to-day contributions to the success of the enterprise is understood and appreciated. Will top management accept that challenge for leadership or will it let it go by default to some outside organization such as the F.A.A.? The reader might well ask himself what *his* company is doing to meet this problem.

MUTUAL SURVIVAL: THE GOAL OF UNIONS AND MANAGEMENT. By E. Wight Bakke. Labor and Management Center, Yale University, New Haven, Conn., 1946. 82 pages. $1.00.

*Reviewed by Robert K. Burns**

This is a research report dealing directly with some of the dynamics of union-management relations. It has a welcome realism and frankness accounted for in part by the fact that it grew directly out of a series of personal contacts with representative union and management leaders in various parts of the country. Of great value are the many insights into current industrial relations problems and their interpretation by the author—a man with a firsthand knowledge of union-management relations gained from close observation of the industrial relations scene in this country and England.

The report sets forth clearly how union and management leaders regard each other. The author lets these leaders speak for themselves in terms of how the attitudes, policies, and practices of each toward the other affect collective bargaining and union-management relations.

The six major problems that union leaders point to as stemming from management policies and practices are reported as follows:

1. *The resistance by employers to increasing the area of terms and conditions of employment determined collectively.* This includes such matters as retaining as much individual dealing with employees as possible, refusal to

* Industrial Relations Center, University of Chicago.

bargain on items considered exclusively within management's province and prerogatives, and emphasis on individual rewards instead of common measures covering rates of pay, seniority, and the like.

2. *Employers' attempts to win employee loyalty to the company, often at the expense of the union.* Examples cited are unilateral innovations beneficial to the workers, and pronouncements which reduce confidence in, or discredit, union leadership.
3. *The tendency of employers to deal with the union "as an outsider"—a third party—and not as an integral part of the enterprise.* Here unions point to the refusal of employers to accept or to help to strengthen the union, their attitude in negotiations and in day-to-day relations.
4. *The use by employers of what the unions consider to be "narrow" economics,* such as focusing on cost considerations without giving sufficient attention to earning and purchasing power and their relation to the economy; resistance to sharing with workers the results of increased productivity; and refusing to consider profits as a basis for wage determination.
5. *The irresponsible and unreasonable attitude and conduct of some managements toward unions.* Here the unions referred to management's insistence on inability to pay without willingness to open the company's books; opposing union demands on principle rather than on pragmatic results; failure to train junior supervision in terms of its responsibilities toward the union under the agreement.
6. *Allegations and attacks by employers on union irresponsibility.* Examples cited by unions include public statements made by employers concerning union irresponsibility, attempts to make unions legally responsible, and the support of legislation looking toward control of unions' internal affairs.

In interviewing representatives of management, the author sought an expression of their hopes, anxieties, and reactions with respect to collective bargaining. In appraising the results of union attitudes, policies, and practices, management representatives, according to the author, single out seven important problems management faces in conducting its industrial relations. As might be expected, these tend roughly to cover the same areas of difficulty cited by the unions:

1. *Employers object to union infringement on management functions, prerogatives, and freedom.* They mention particularly the growing difficulty of making quick decisions when necessary, interference with their organization and direction of the working force, and various restrictions on and resistances to effective production.
2. *Union efforts to reduce the possibility of individual adjustments by imposing common standards and rules.* Examples cited include quota setting and restrictions on individual production and compensation, general emphasis on leveling down instead of bringing up the less able, and substituting other yardsticks in place of merit.
3. *Union methods to develop loyalty of workers toward the union by means which reduce loyalty to the firm.* Management objects strongly to union emphasis on the exploitation features of the employer's role, on the employees' need of protection from the employer, on the belief that employers must be pressured into making concessions; also to the development of employee antagonism toward the employer, and attacks upon management's good faith and integrity.
4. *Entrance of a third party and injection of issues irrelevant to company welfare into the firm's industrial relations.* Some managements feel many union demands are rooted in internal union politics, in jurisdictional conflicts, or stem from unions' desire for industry-wide standards and power.
5. *Use by the union of what management considers to be "unsound" economics.* This includes insufficient consideration of cost-price-volume and employment relationships, the relation of man-hour productivity to wages, and excessive emphasis by unions on "purchasing power" theories without reference to the financial stability of a particular firm.
6. *Irresponsible and insincere conduct by the union toward the employer.* Examples cited include threats of coercion, use of force in the forms of slowdowns and stoppages, and the unwarranted use of strikes for recognition, for organizing purposes, in sympathy situations; unfair and untrue representation of the employer's position, and lack of interest in the welfare of the company.
7. *Irresponsible and undemocratic con-*

duct of internal union affairs. This includes such matters as coercion of individual workers, lack of democratic procedures and practices within the union, and the absence of adequate accounting of union funds.

These problems and their effects on collective bargaining, as viewed by management and union leaders, are not only stated well in this report, but are amplified and given deeper meaning by: (1) specific examples and types of experience that each side cites in its relationship with the other; (2) statements which help to show the underlying assumptions and attitudes that each feels the other holds in carrying out its policies. Mr. Bakke gives us a real insight into these beliefs and convictions as seen separately through the eyes of union and management leaders. Finally, under the heading of "Favorable Factors" are recorded some of the specific experiences related by union and management leaders which hold out some hope for the eventual solution of each of these separate problems.

From this study of union-management viewpoints, the author has formulated a number of important conclusions:

1. That both management and union leaders have developed certain convictions as to what constitute working principles of sound management on one hand and effective unionism on the other.
2. That these convictions held by unions and management do not mesh at a number of important points.
3. That each associates its own survival with the maintenance of its own particular set of principles and convictions.
4. That changes in attitudes, policies, and practices, by one or the other or both must be made if workable mutual relations are to develop and a struggle for dominance and power is to be avoided.

The author has done a superb job of laying bare some of the basic convictions that condition the attitudes and actions of management and union leaders. In particular, he has illumined many heretofore obscure aspects of the nature and causes of industrial conflict and, most important, has carefully catalogued some of the methods by which this conflict can be at least partially reduced.

This slim 80-page report is well worth reading not once but several times. If the experience of the reviewer is at all typical, other interested readers will find themselves looking back again and again to reconsider some of the many observations and insights contained in its pages. This represents industrial relations research at its finest—suggestive, provocative, stimulating; research with definite use-value that should aid both unions and management to understand more clearly the nature and significance of their own policies and practices and their effects upon one another. This is the first of a series of Interim Reports being prepared by the Labor and Management Center at Yale University. Other forthcoming titles will be awaited with interest.

Briefer Book Notes

[*Please order books directly from publishers*]

General

HOW TO ORGANIZE AND MANAGE A SMALL BUSINESS. By Nelms Black. University of Oklahoma Press, Norman, Okla., 1946. 367 pages. $3.00. Written expressly for the uninitiated planning to establish individual small businesses, this book is designed to furnish the necessary facts and figures for founding and developing the enterprise with a minimum of guesswork. Discusses the choice of business, methods of financing, bookkeeping, credits and collections, determination of profitable prices, government and taxes, and many other phases of small-business management with which the founder of a new enterprise should be familiar. The author charts no royal road to business success, but presents, instead, practical recommendations for obtaining preliminary experience, acquiring adequate knowledge of the particular business selected, and using tried techniques for putting —and keeping—the small business in operation.

CONTROLLING WORLD TRADE: *Cartels and Commodity Agreements.* By Edward S. Mason. McGraw-Hill Book Company, Inc., New York, 1946. 289 pages. $2.50. In this volume, thirteenth in the series of research studies made for the Committee for Economic Development, the author examines two important tools used in prewar international trade—the cartel and the commodity agreement. Describing the background conditions which gave rise to each, he appraises the role of both in future world trade and makes some suggestions for eliminating their undesirable features. Noting immediate major problems facing most nations—such as the distortions in raw materials production resulting from the war—the author advances his recommendations for achieving the long-range goal of rational international trading.

GUIDE TO PUBLIC AFFAIRS ORGANIZATIONS: *With Notes on Public Affairs Informational Materials.* By Charles R. Read and Samuel Marble. Public Affairs Press, Washington 8, D. C., 1946. 129 pages. $2.00. Identifies and describes more than 400 organizations representing the major areas of activity in which men are endeavoring to improve the society in which they live. Also indicates various channels through which the reader can become acquainted with other organizations, and guides him to pertinent informational materials about the areas covered.

THE MONEY VALUE OF A MAN. By Louis I. Dublin, Alfred J. Lotka and Mortimer Spiegelman. The Ronald Press Company, New York, 1946. 214 pages. $6.00. Revised edition of a pioneer study of the evaluation of capitalized earning power, and of the value of the American wage earner or salaried man at successive ages. Extensive recomputations have been made in this edition to conform with altered conditions, leading to materially increased figures for the value of a man. The estimates given have numerous applications in industry, life insurance, social insurance, social work, compensation for personal injury and incapacitation, etc.

EXECUTIVE THINKING AND ACTION. By Fred DeArmond. McGraw-Hill Book Company, Inc., New York, 1946. 251 pages. $3.00. The best training for leadership, according to the author, is a study of the methods of leaders, past and present. Accordingly, this book describes the methods and practices of executive achievement used by leaders in commerce, association work, government, and the military; and it shows how, by the adaptation of these selfsame methods and practices, the reader can develop his executive ability.

HIGHER CONTROL IN MANAGEMENT. By T. G. Rose. Sir Isaac Pitman & Sons, Ltd., London, 1944. Fourth edition. 279 pages. 15*s.* This popular British management text offers "a method of presenting the facts and figures of industrial and commercial undertakings so that they can be used for the purpose of management."

YOU—*TRIUMPHANT!* By Eugene J. Benge. Harper & Brothers, New York, 1946. 294 pages. $3.00. This "guide to effective personal living" provides entertaining and profitable reading for the man who desires to improve his personality. The author's principles embrace findings of medical research, psychology, economics, religion, engineering, and business. Includes a number of self-analysis scales and self-administered tests.

NATIONAL INCOME: *A Summary of Findings.* By Simon Kuznets. National Bureau of Economic Research, Inc., New York, 1946. 144 pages. $1.50. This study analyzes first the structure of national income during the two decades between the two world wars, then the longer-term changes as revealed by estimates for the seven decades 1869-1938. Fluctuations in national income and its components during business cycles are discussed and some of the problems of use and interpretation of income data are enumerated.

THE CONCENTRATION OF ECONOMIC POWER. By David Lynch. Columbia University Press, New York, 1946. 423 pages. $5.50. This study presents an analysis of the testimony before the Temporary National Economic Commission, established at the request of President Roosevelt for an investigation of the concentration of economic power in American industry and its effect upon the decline of competition. In conclusion, Mr. Lynch attempts to evaluate the role of congressional investigations and their contributions to American economic and political life.

ARSENAL OF DEMOCRACY: *The Story of American War Production.* By Donald M. Nelson. Harcourt, Brace and Company, New York, 1946. 439 pages. $4.00. This is Donald M. Nelson's personal story of the harnessing of America's industrial might for war. With informal good humor, the former chairman of the War Production Board paints an impressive picture of the Arsenal of Democracy in being and of the men who shaped and guided its destinies to final victory.

OUTLINE FOR A MANAGEMENT AUDIT. Policyholders Service Bureau, Metropolitan Life Insurance Company, New York, 1946. 23 pages. Gratis. This comprehensive checklist is composed of questions on fundamental management policies and practices to enable the large or small company to take stock of its administrative effectiveness.

Labor Relations and Personnel Management

WHO'S WHO IN LABOR. Edited by Marion Dickerman and Ruth Taylor. The Dryden Press, New York, 1946. 480 pages. $12.00. A highly valuable reference work for all who deal with organized labor. Contains the authorized biographies of more than 5,000 men and women who lead labor or who deal with labor in the United States and Canada. Includes data on careers; parents; immediate family; present labor affiliations and other labor connections; civic or government activities; political, church, and fraternal connections; education; writings; etc. In addition, the volume contains a list of international labor unions, a directory of the labor press, a list of educational and research directors, a chronology of labor legislation, a glossary of labor terminology edited by Dr. John R. Steelman, and the constitutions of the AFL and CIO.

THE *HOW* AND *WHY* OF PAYROLL RECORDS: *With Employment and Payroll Forms That Work.* An original Research Project by the Frank M. Knox Company, Inc. Published by Ross-Martin Company, Tulsa 1, Okla., 1946. 134 pages. $2.00. This comprehensive manual outlines the basic requirements of recordkeeping for personnel and payroll departments, and shows how to meet the exacting requirements of various federal laws. Includes a list of data that is required or may be desired on records and forms, along with illustrations of forms that meet the basic requirements.

EDUCATING FOR INDUSTRY: *Policies and Procedures of a National Apprenticeship System.* By William F. Patterson and Marion H. Hedges. Prentice-Hall, Inc., New York, 1946. 229 pages. $2.50. This study stresses management's and labor's mutual stake in apprenticeship training. It describes the planning and development of apprenticeship programs, functions of the apprentice supervisor, selection of apprentices, job instruction and group activities. Also discusses the national apprenticeship program and the legislation under which it operates, as well as the roles of the individual states in apprenticeship. Includes an extensive bibliography.

188 RETIREMENT PLANS. Bankers Trust Company, New York, 1946. 59 pages. Gratis. This analysis of 188 plans adopted by outstanding organizations between December, 1943, and June, 1946, shows general trends in the provisions of retirement plans as well as trends for individual industries. Data on three major types of plans—those covering all employees, those covering salaried employees only, and those covering employees earning in excess of $3,000 per year—are broken down under the following headings: type of company, year plan made effective, conditions for eligibility, number of employees originally eligible, contributions by employees, conditions under which an employee will be entitled to a full vested right in company's contributions prior to normal retirement, method of funding, past-service benefit formula, future-service benefit formula, and pension benefits—including primary social security benefits (based on 30 years' future service and expressed as a percentage of average annual compensation).

PERSONNEL TESTING. By Forrest V. Routt, Jr. California Council of Personnel Management, 870 Market Street, San Francisco 2, Calif., 1946. 26 pages. $1.00. Based on a field check of the current status of personnel testing in 100 organizations, this report provides helpful information for the firm embarking on a testing program. It includes a list of the tests which are used by the participating companies.

WAGES UNDER NATIONAL AND REGIONAL COLLECTIVE BARGAINING: *Experiences in Seven Industries.* By Richard A. Lester and Edward A. Robie. Industrial Relations Section, Department of Economics and Social Institutions, Princeton University, Princeton, N. J., 1946. 103 pages. $1.50. To determine how existing machinery for national or regional collective bargaining has worked, and the desirability of further attempts toward wage uniformity, this study examines the experiences of seven industries having uniform wage scales—pressed and blown glassware, pottery, stove manufacturing, full-fashioned hosiery, silk and rayon dyeing and finishing, flat glass, and the West Coast paper industry. Emphasizes factors that tend to disrupt wage equality under multiple-employer bargaining as well as those that encourage wage uniformity.

NUTRITION—FOR YOUNG AND OLD. New York State Joint Legislative Committee on Nutrition, New York, 1946. Available from State Senator Thomas C. Desmond, Chairman of the Committee, 94 Broadway, Newburgh, N. Y. 227 pages. Single copies gratis. Representing the combined efforts of many of the leading nutritional experts of the country, this report contains much material of general interest and includes several excellent chapters on in-plant feeding and industrial nutrition problems.

THE PSYCHOLOGY OF NORMAL PEOPLE. By Joseph Tiffin, Frederick B. Knight and Eston J. Asher. D. C. Heath and Company, Boston, 1946. 581 pages. $3.25. The revised edition of this basic text contains a considerable amount of new material on developments during the past five years in the fields of aptitude and personality evaluation, emotion, thinking, and intelligence. A general introduction to the field of psychology for beginners or for those who desire to review some of the fundamentals.

MEDICAL SERVICE IN INDUSTRY AND WORKMEN'S COMPENSATION LAWS. Revised Edition. By Gaylord R. Hess, M.D. American College of Surgeons, 40 East Erie Street, Chicago 11, 1946. 100 pages. Dr. Hess' revision of this study contains much of the material found in the original edition by Dr. Newquist, but in many instances the original subject matter has been treated in greater detail. This extremely valuable manual considers its staff, location, space requirements, and equipment, as well as its functions and organizational status. Discusses the relationship between industrial medicine and workmen's compensation, and presents significant results of a recent study of illness and injury experience in industry and its costs.

SELECTED READING LIST ON INDUSTRIAL RELATIONS FOR SUPERVISORS. Industrial Relations Section, California Institute of Technology, Pasadena 4, Calif., 1946. 8 pages. 30 cents. This excellent bibliography dealing with industrial relations is of interest to a far broader audience than its title suggests. It lists 32 volumes, many of which were written for management at various levels other than that of foreman or supervisor; describes each book in general; and gives the name of its publisher. Also includes specific page references to discussions of 13 major problems of industrial relations —e.g., principles of organization, supervisor's job, wages and job evaluation, and training.

SPOTLIGHT ON LABOR UNIONS. By William J. Smith, S. J. Duell, Sloan and Pearce, New York, 1946. 150 pages. $2.50. This pro-labor book strongly defends unionism while deprecating many of its abuses; approves the AFL, while exposing its basic weaknesses; commends and cautions the CIO and castigates the Communists; encourages honest independent unions while excoriating company unionism; promotes the principle of the closed shop but points out its potential dangers; and approves political action but repudiates the setup of PAC. Father Smith unfolds a plan for the reestablishment of industrial society on the principle of management-labor partnership, and he says that the burden of leadership rests squarely on the shoulders of management.

PUBLICATIONS ISSUED TO EMPLOYES. Association of National Advertisers, Inc., New York, 1946. 19 pages. $2.00. Presents in capsule form recent developments in the preparation of employee information media—house organs, annual reports, handbooks, public relations booklets, etc. Direct quotations and several illustrations suggest some new techniques which various companies are using to get their messages across.

MANUAL FOR LABOR DISPUTES. By Leonard J. Smith. Prentice-Hall, Inc., New York, 1946. 41 pages. $1.00. Helpful pointers on employer-employee relations in both unionized and non-union plants, plus concise suggestions for avoiding or resolving labor disputes.

ADDRESSES ON INDUSTRIAL RELATIONS: 1946. *Bureau of Industrial Relations Bulletin No. 17,* University of Michigan Press, Ann Arbor, Mich., 1946. 88 pages. $1.50. Contains papers on 10 timely subjects by 11 authorities in their respective fields. Labor relations, arbitration, wage policies and problems, employment stabilization, psychological testing, cost control, work simplification training, and intraorganizational communication are among the topics covered. These papers were presented at recent conferences sponsored by the Bureau of Industrial Relations of the University of Michigan.

Production Management

STATISTICAL QUALITY CONTROL. By Eugene L. Grant. McGraw-Hill Book Company, Inc., New York, 1946. 563 pages. $5.00. Discusses the laws of probability that may be used to improve product acceptance procedures and thus assure maintenance of quality standards at a given inspection cost. Explains the Shewhart control chart, its use in manufacturing to reduce costs of spoilage and rework and to obtain better coordination among design, production, and inspection. Many examples are cited to demonstrate the usefulness of quality control techniques in dealing with quality problems in mass production.

HUMAN WELFARE AND INDUSTRIAL EFFICIENCY: *An Introduction to Industrial Psychology.* By L. S. Hearnshaw and R. Winterbourn. A. H. and A. W. Reed, 182 Wakefield St., Wellington, C.I., New Zealand, 1945. 169 pages. 5*s.* postpaid. Describes practical applications of psychology to such industrial problems as worker fatigue and boredom, plant accidents, individual personality difficulties, absenteeism, labor turnover and industrial unrest; and discusses the uses of industrial psychology in vocational guidance, employee selection, and training.

HOW TO TAKE PHYSICAL INVENTORY. By Richard F. Neuschel and Harry T. Johnson. McGraw-Hill Book Company, Inc., New York, 1946. 159 pages. $2.00. This practical guide for planning and executing a physical inventory is divided into two parts. The first, consisting of seven chapters, is concerned with the physical preparation for the inventory, planning procedures and organization, selection and training of inventory-taking personnel, and the summarization and verification of the inventory. The second part, presented as an appendix, consists of a manual of tested inventory instructions which apply to the principles set forth in the text.

RATIONALISATION DES ACHATS INDUSTRIELS (*Rationalization of Industrial Purchases*). *Publication No. 49,* Comité National Belge de l'Organisation Scientifique, 1946. 72 pages. 60 francs. Obtainable from the Organisation at 1775-15 Rue des Drapiers, Brussels, Belgium. This report in the French language summarizes recent studies of industrial purchasing conducted by the Belgian National Committee for Scientific Organization. Topics include methods of purchasing raw materials and machinery, purchasing of standardized products, technical specifications, the receiving function, organization of the purchasing department, etc.

FIRE: *How to Prevent It—How to Put It Out.* Ebasco Services, New York, 1946. 69 pages. This well-illustrated pocket-sized manual for factory workers contains much specific information on controlling fire causes and on fire-fighting equipment and techniques.

Marketing and Sales Management

THE PEOPLE LOOK AT RADIO. By Paul F. Lazarsfeld and Harry Field. The University of North Carolina Press, Chapel Hill, N. C., 1946. 158 pages. $2.50. The University of Denver's National Opinion Research Center conducted this survey of the public reaction to radio's programs, presentation of news, and advertising. Of interest to public relations men and potential advertisers in this medium.

DOGS THAT CLIMB TREES. By Henry Hoke. Graphic Books, Inc., New York 17, N. Y., 1946. 86 pages. $1.50 (case bound); $1.00 (paper). A series of colorful personal experience episodes which formulated the author's basic thinking about direct mail advertising.

JOB ANALYSIS FOR RETAIL STORES. By Michael Jucius, H. H. Maynard and Carroll L. Shartle. Bureau of Business Research, The Ohio State University, Columbus, Ohio, 1945. 66 pages. $2.00. Describes how a job analysis program may be developed for use in department stores, chain stores, other retail organizations, and wholesale establishments. Step-by-step procedures are illustrated by sample forms, job and factor descriptions, etc.

PREPARATION AND USE OF VISUAL AIDS. By Kenneth B. Haas and Harry Q. Packer. Prentice-Hall, Inc., New York, 1946. 224 pages. $4.00. Each chapter of this practical text is devoted to a specific type of visual aid that can be used in worker training, sales demonstrations and displays, educational programs, or advertising. Emphasis is placed on where to find, how to prepare, and how to use these aids.

RETAIL JOB ANALYSIS AND EVALUATION. By George Plant and John B. Pope. Store Management and Personnel Groups, National Retail Dry Goods Association, New York 1, N. Y., 1946. 140 pages. $3.50. A general guide to help retail stores develop and apply an organized program of analyzing and accurately defining jobs and evaluating them in relation to each other by the point system.

Office Management

THE CHARACTERISTICS OF SALARY GRADES. By Edward N. Hay. American Management Association, New York 18, N. Y., 1946. 16 pages. 25 cents. This article from the November issue of PERSONNEL has been reprinted in pamphlet form to make it available to office managers and financial executives who may not see PERSONNEL regularly. It describes the procedures employed in setting up an equitable structure of rate ranges and salary grades. The author shows how to apply rate ranges to single-rate jobs, how to raise the level of the salary structure, how to test for "symmetry," etc. Executives who have read Mr. Hay's "Control of Salary Expense" (*Financial Management Series No. 79*) will find this new study equally informative.

PROCEEDINGS: 1946—NATIONAL OFFICE MANAGEMENT ASSOCIATION. Obtainable from the Association, 2118 Lincoln-Liberty Building, Philadelphia 7, Penna. 102 pages. $5.00. The collected addresses delivered before NOMA's 27th Annual Conference. Features papers on supervisory training, work simplification in the office, incentives for clerical operations, salary evaluation and administration, office unionization, etc. Contributing authors include William R. Spriegel, Allan H. Mogensen, Edward N. Hay, Waldo Williams, and Clifton Utley.

Occupational Guidance

THE JOB THAT FITS YOU—AND HOW TO GET IT. By John and Enid Wells. Prentice-Hall, Inc., New York, 1946. 423 pages. $3.75. This comprehensive vocational guide enables the prospective job seeker to self-test and analyze his skills and aptitudes as a means of determining the occupations for which he is best fitted. Includes an extensive battery of quizzes based on tests employed by the Armed Forces, the War Manpower Commission, the Civil Service Commission, and the USES to determine manipulative dexterity, mechanical comprehension, vocabulary, etc. Discusses the application of test results to the demands of specific types of occupations, and provides practical pointers for landing the right job.

Packaging

MODERN PACKAGING ENCYCLOPEDIA: *Packaging Catalog, 1946-47.* Edited by Christopher W. Browne, Charles A. Southwick, Jr., *et al.* Packaging Catalog Corporation, New York, 1946. 1,035 pages. $5.00. Formerly known as the *Packaging Catalog,* this encyclopedia, covering every important phase of packaging and packing, is larger than any preceding edition. Three-fourths of the content is new—including a checklist for package planning, a bibliography of current magazine literature pertinent to packaging, discussion of new trends in legal regulation of trademarked goods, a new photographic review of folding box types, diagrammatic presentation of bag-closing methods, three articles on vacuum-gas packing, an entirely new chapter on packaging machinery as the production man sees it, and many others.

INSURANCE

LIFE INSURANCE FACT BOOK: 1946. Institute of Life Insurance, 60 East 42d Street, New York 17, N. Y. 66 pages. Gratis. A handy source book of the more important life insurance statistics.

PUBLICATIONS RECEIVED

[Please order books directly from publishers]

THE REGULATION OF THE SECURITY MARKETS. By Willard E. Atkins *et al.* The Brookings Institution, Washington, D. C., 1946. 126 pages.

SELECTING A STORE LOCATION. By Helen G. Canoyer. *Economic Series No. 56,* Marketing Division, Office of Domestic Commerce, U. S. Department of Commerce, 1946. Available from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 68 pages. 20 cents.

THE PRACTICAL WAY TO HANDLE GRIEVANCES. Labor Relations Institute, 1776 Broadway, New York 19, 1946. 58 pages. $2.25.

FISCAL POLICY TO FIGHT INFLATION. The Research and Policy Committee, Committee for Economic Development, New York, 1946. 21 pages. 25 cents.

THE FEDERAL LABOR LAWS: *A Manual for Supervisors.* National Foremen's Institute, Inc., Deep River, Conn., 1946. 72 pages. $2.50.

PERSONNEL ADMINISTRATION IN LIBRARIES: *Papers Presented Before the Library Institute at the University of Chicago, August 27–September 1, 1945.* The University of Chicago Press, Chicago, 1946. 168 pages. $3.00.

CURRENT OPERATING AND PERSONNEL PROBLEMS: *Proceedings of Store Management and Personnel Conference, Cleveland, May 27–29, 1946.* National Retail Dry Goods Association, 100 West 31 Street, New York 1, 1946. 116 pages. $3.50.

PROCEEDINGS OF INDUSTRIAL RELATIONS AND PERSONNEL CONFERENCE. Industrial Relations Association of Wisconsin, Milwaukee, 1946. 94 pages.

PROCEEDINGS OF THE CLINIC ON SALESMANSHIP TRAINING. Research Bureau for Retail Training, University of Pittsburgh, Pittsburgh, March, 1946. 44 pages. $2.00.

COMPANY AND UNION RESPONSIBILITIES AND LIABILITIES UNDER THE LABOR AGREEMENT. By Samuel Marsh *et al.* The Economic and Business Foundation, New Wilmington, Pa., 1946. 141 pages.

COST OF LIVING FOR WOMEN WORKERS AT ADEQUATE MAINTENANCE AND PROTECTION OF HEALTH. Division of Industrial Relations, New York State Department of Labor, Albany, 1945. 30 pages.

THE WAR AND WOMEN'S EMPLOYMENT: *The Experience of the United Kingdom and the United States.* International Labour Office, 3450 Drummond St., Montreal 25, Canada, 1946. 287 pages. $1.50.

COLLECTIVISM CHALLENGES CHRISTIANITY. By Verne Paul Kaub. Light and Life Press, Winona Lake, Indiana, 1946. 249 pages. $2.00.

SALES PROMOTION IN THE TEXTILE INDUSTRY. James C. Cumming. Fairchild Publishing Co., New York, 1946. 132 pages. $3.00.

LABOR UNIONISM IN AMERICAN AGRICULTURE. *Bulletin No. 836,* Bureau of Labor Statistics, U. S. Department of Labor, 1945. Available from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 457 pages. 70 cents.

HOW TO USE HANDICAPPED WORKERS. By Arthur T. Jacobs. National Foremen's Institute, Inc., Deep River, Conn., 1946. 186 pages. $3.50.

EDUCATIONAL PREPARATION FOR PUBLIC ADMINISTRATION: *A List of Colleges and Universities Offering Programs of Training.* Public Administration Clearing House, 1313 East 60 St., Chicago 37, September, 1946. 19 pages. 10 cents.

RETAILERS MANUAL OF TAXES AND REGULATIONS. Institute of Distribution, Inc., 25 West 43 St., New York 18, 1946. 177 pages. $7.50.

AMERICANS IN PERSIA: *A Clinic for the New Internationalism.* By Arthur C. Millspaugh. The Brookings Institution, Washington, D. C., 1946. 293 pages. $3.00.

COLLECTIVE BARGAINING AND DECADENCE: *The Solution of Britain's Gravest Problem.* By A. Grant McGregor. Sir Isaac Pitman & Sons, Ltd., London, 1946. 79 pages. 5*s.* net.

NAM LOOKS AT CARTELS. National Association of Manufacturers, 14 West 49 St., New York 20, N. Y., November, 1946. 62 pages. Gratis.

AUSTRALIAN MEAT-WORKS: *Some Aspects of Personnel Practice and Working Conditions. Bulletin No. 10,* Industrial Welfare Division, Department of Labour and National Service, Nicholas Building, 37 Swanston St., Melbourne, Australia, 1946. 47 pages.

JOB RATING MANUAL: *Definitions of the Factors Used in Evaluating Hourly Rated Jobs.* Industrial Relations Department, National Electrical Manufacturers Association, 155 East 44 St., New York 17, N. Y., 1946. 13 pages. $1.00 (postpaid).

GUIDE FOR USE OF NEMA JOB RATING MANUAL. Industrial Relations Department, National Electrical Manufacturers Association, 155 East 44 St., New York 17, N. Y., 1946. 46 pages. $1.50 (postpaid).

PROCEEDINGS OF THE SIXTEENTH ANNUAL WESTERN PENNSYLVANIA INDUSTRIAL CONFERENCE, Y. M. C. A. of Wilmerding, Wilmerding, Pa., 1946. 44 pages. Gratis.

PERSONNEL ADMINISTRATION AND CIVIL SERVICE: *A Selected List of References.* The Library, U. S. Civil Service Commission, Washington, D. C., May, 1946. 32 pages. Gratis.

CORPORATE SURETYSHIP: *The Balance Wheel of American Business.* Surety Association of America, 60 John St., New York, September, 1946. 36 pages. Gratis.

ANALYSIS OF UNION AGREEMENTS IN THE PAPER AND PULP INDUSTRY, 1945. American Paper and Pulp Association, 122 East 42 St., New York 17, N. Y., March, 1946. 44 pages. Gratis.

BODY SAFETY GUIDE. Safety Division, American Optical Company, Southbridge, Mass. Broadside. Gratis.

EYE SAFETY GUIDE. Safety Division, American Optical Company, Southbridge, Mass. Broadside. Gratis.

COMMERCIAL AIR TRANSPORTATION. By John H. Frederick. Richard D. Irwin, Inc., Chicago, 1946. *Revised edition.* 791 pages. $5.00.

MONETARY POLICIES AND FULL EMPLOYMENT. By William J. Fellner. Bureau of Business and Economic Research, University of California, Los Angeles, 1946. 268 pages. $3.50.

POST-WAR CHANGES IN THE EMPLOYMENT OF WOMEN IN NEW YORK STATE, 1944-1946. Division of Industrial Relations, Women in Industry, and Minimum Wage, State of New York Department of Labor, July, 1946. 41 pages.

COMMUNIST INFILTRATION IN THE UNITED STATES: *Its Nature and How to Combat It.* Economic Research Department, Chamber of Commerce of the United States, Washington 6, D. C., 1946. 40 pages. 25 cents.

THE ROLE OF PRICES AND PRICE DETERMINATION. National Association of Manufacturers, 14 West 49 St., New York, 1946. 50 pages.

PROFIT AND LOSS IN THE ENTERPRISE SYSTEM. National Association of Manufacturers, 14 West 49 St., New York, 1946. 47 pages.

SALARIES AS OF AUGUST 1, 1946, IN ST. LOUIS SOCIAL AND HEALTH AGENCIES ACCORDING TO STANDARD JOB DESCRIPTIONS. Research Bureau, Social Planning Council of St. Louis and St. Louis County, 613 Locust St., St. Louis 1, Mo., 1946. 189 pages. $1.00.

A REGIONAL FORUM FOR MARKETING PROBLEMS (Proceedings of the First Pacific Northwest Marketing Conference). Marketing Committee, Seattle Chamber of Commerce, Seattle 4, Wash., 1946. 89 pages. $3.00.

RELIEF AND SOCIAL SECURITY (A summary of the volume published May, 1946). By Lewis Meriam. The Brookings Institution, Washington, D. C., October, 1946. 42 pages. 50 cents.

THE WORKS ENGINEER: *A Practical Manual on Building and Plant Maintenance for the Works Manager and Works Engineer.* By W. R. J. Griffiths and W. O. Skeat. Sir Isaac Pitman & Sons, Ltd., London, 1945. *Second edition.* 364 pages. 21/ net.

YOUR INCOME TAX. By J. K. Lasser. Simon and Schuster, New York, 1947. 168 pages. $1.00.

FUNDAMENTALS OF SUCCESSFUL MANUFACTURING. By George Gaynor Hyde. McGraw-Hill Book Company, Inc., New York, 1946. 201 pages. $2.50.

ADVANCED ACCOUNTING. By E. I. Fjeld and Lawrence W. Sherritt. The Ronald Press Co., New York, 1946. 490 pages. $4.50.

VETERANS' RIGHTS UNDER UNION AGREEMENTS. Industrial Relations Branch, Bureau of Labor Statistics, U. S. Dept. of Labor, Washington, D. C., Oct., 1946. 12 pages.

ELEMENTS OF PUBLIC ADMINISTRATION. By James W. Fesler *et al.* Edited by Fritz Morstein Marx. Prentice-Hall, Inc., New York, 1946. 637 pages. $6.65.

GETTING A JOB IN ADVERTISING. By James Davis Woolf. The Ronald Press Co., New York, 1946. 103 pages. $2.00.

THE INSURANCE OF LIBRARIES: *A Manual for Librarians.* By Dorothea M. Singer. American Library Association, Chicago, 1946. 92 pages. $1.50.

LAPSES FROM FULL EMPLOYMENT. By A. C. Pigou. Macmillan & Co., Ltd., London, 1945. 73 pages. $1.50.

BUYING FOR RETAIL STORES. By John W. Wingate and Norris A. Brisco. Prentice-Hall, Inc., New York, July, 1946. *Revised edition.* 685 pages. $6.65.

GUIDE TO JOBS: *How and Where to Get Them.* By Maxwell Lehman and Leon S. Theil. Reader Service, 243 West 17th St., New York, N. Y., 1946. 40 pages. 25 cents.

LASSER'S BUSINESS TAX GUIDE—1947. By J. K. Lasser. Simon and Schuster, New York, 1947. 218 pages. $1.00.

WHAT IS IMPORTANT IN SELLING? Research Bureau for Retail Training, University of Pittsburgh, Pittsburgh 13, Penna., December, 1946. 8 pages.

REGIONAL SURVEY OF THE UNITED STATES MARKET FOR CONFECTIONERY. By George F. Dudik. *Industrial Series No. 64,* Office of Domestic Commerce, U. S. Department of Commerce, 1946. Available from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 41 pages. Gratis.

PLANT PURCHASING DIRECTORY—FALL EDITION, 1946: *For Production, Purchasing, and Engineering Executives.* Plant Purchasing Directory, Chicago, 1946. $5.00.

NATIONAL FALL CONFERENCE PROCEEDINGS OF THE NATIONAL ASSOCIATION OF SUGGESTION SYSTEMS. National Association of Suggestion Systems, 122 S. Michigan Ave., Chicago 3, Ill., 1946. 52 pages.

PACKAGING AND SHIPPING CONTAINERS: *Basic Information Sources.* Compiled by Catherine C. Gartland. Inquiry Reference Service, Office of Domestic Commerce, U. S. Department of Commerce, Washington 25, D. C., October, 1946. 23 pages. Gratis.

ADJUSTMENT TO PHYSICAL HANDICAP AND ILLNESS: *A Survey of the Social Psychology of Physique and Disability.* By Roger G. Barker *et al. Bulletin 55,* Social Science Research Council, 230 Park Ave., New York 17, N. Y., 1946. 372 pages. $2.00.

ECONOMIC RESEARCH AND THE DEVELOPMENT OF ECONOMIC SCIENCE AND PUBLIC POLICY (a compilation of papers presented at the 25th Anniversary Meeting of the National Bureau of Economic Research). National Bureau of Economic Research, Inc., 1819 Broadway, New York 23, N. Y., 1946. 198 pages. $1.00.

OUTPUT AND PRODUCTIVITY IN THE ELECTRIC AND GAS UTILITIES, 1899-1942. By Jacob Martin Gould. National Bureau of Economic Research, Inc., New York, 1946. 195 pages. $3.00.

PRICE-QUANTITY INTERACTIONS IN BUSINESS CYCLES. By Frederick C. Mills. National Bureau of Economic Research, Inc., New York, 1946. 140 pages. $1.50.

RELATIONSHIPS BETWEEN SUPERVISORY MANAGEMENT AND SHOP STEWARDS. By Joseph B. Patton *et al.* The Economic and Business Foundation, New Wilmington, Penna., March, 1946. 272 pages. 75 cents.

BIBLIOGRAPHY OF INDUSTRIAL ENGINEERING AND MANAGEMENT LITERATURE. By Ralph M. Barnes and Norma A. Englert. William C. Brown Co., 1946. *Fifth edition.* 136 pages. $3.00.